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INTEROFFICE CORRESPONDENCE



Hawaiian Electric Company, Inc.

May 20, 2005

To: Dave Waller
From: George Willoughby 
Subject: HECO May 2005 Sales and Peak Forecast

Attached for your review is HECO's May 2005 Sales and Peak Forecast. The weather normalized 2005 sales forecast of 7,799.5 GWh is 0.9% above recorded 2004. Thereafter, sales are projected to grow by 2.6% in 2006 and 2.3% in 2007. The May 2005 forecast is 43.3 GWh and 20.6 GWh below Report 1 (June 2004 update) forecast in 2005 and 2006, respectively. It is above the June 2004 update for 2007 – 2009.

This forecast is below the June 2004 update in 2005 and 2006 primarily because of commercial sales projections that are lower than previously expected, mostly due to lower loads for some large projects, slower large project load buildups, and lower than expected results for the 1st quarter of 2005, including the impact of the UH Manoa flood. This decrease is somewhat offset by expectations that residential use per customer will recover after year-over-year declines in the 1st quarter of 2005 and show improvement for the remainder of 2005 over the levels forecasted in the June 2004 sales update.

The change in the May 2005 peak forecast as compared to the June 2004 update follows a similar pattern to the sales difference. The forecast peak for 2005 is lower but projected peaks are higher for the remainder of the forecast horizon.

The near-term outlook for the local economy remains very optimistic. The local economy continues to show strength due to activity in sectors such as real estate and construction, and the visitor industry has rebounded, providing the final piece to an overall healthy economy. The residential sector has slowed in comparison to the robust growth seen in 2004, but with a strong local economy, low unemployment, increasing personal income and relatively low interest rates, this sector is expected to continue to grow. In addition, military projects are expected to make major contributions to the local economy beginning in 2005.

Please let me know if you have any questions. I am available to discuss the update with the Executive Staff at their convenience.

Attachment

cc: T. Michael May	J. Takamura
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**Hawaiian Electric Company, Inc.
MAY 2005 SALES AND PEAK FORECAST**

Executive Summary

A healthier tourism industry, supported by strong U.S. economic performance and a growing Japan economy, provides an optimistic outlook for the Hawaii economy. With the recovery of visitor arrivals, the local economy strengthened in 2004, and continued to see vigorous activity in real estate and construction. The residential sector responded to a stronger local economy and historically low interest rates with robust customer use growth in 2004. The other critical sector of the local economy, the military, is also expected to see significant growth with the return of deployed troops, planned construction projects, and other strategic implementations during the forecast horizon.

As shown in Exhibit 1, the May 2005 sales forecast expects weather normalized sales of 7,799.5 GWh in 2005, which is 0.9% above recorded 2004. Sales are projected to increase by 2.6% in 2006 to 8,002.8 GWh, and by 2.3% in 2007. Growth averages 1.3% per year for 2008 – 2010. Increases in military sector load, due to the Stryker Brigade transformation, the C-17 squadron at Hickam and military housing privatization will be an important driver of growth during the next few years. As in the June 2004 sales update, an aircraft carrier is assumed to be homeported at Pearl Harbor beginning in July 2009.

This update is lower than the June 2004 sales update, which was used for 2005 Report 1 financial purposes and for the HECO rate case (Docket No. 04-0113). As shown in Exhibit 2, the May 2005 forecast is lower than Report 1 by 43 GWh and 21 GWh in 2005 and 2006, respectively. The May forecast is 31 GWh, 86 GWh, and 106 GWh higher for the remaining three years of the June 2004 update forecast horizon.

The more pessimistic outlook in 2005 – 2006 is primarily due to commercial sales projections that are lower than previously expected, mostly due to lower loads for some large projects, slower large project load buildups, and lower than expected results for the 1st quarter of 2005, including the impact of the UH Manoa flood. This decrease is somewhat offset by expectations that residential use per customer will recover after year-over-year declines in the 1st quarter of 2005 and show improvement for the remainder of 2005 over the levels forecasted in the June 2004 sales update.

Economic Assumptions

The sanguine view of Hawaii's economy has persisted since early 2005. Strong job and income growth should occur in nearly every sector of the economy, but are especially notable in construction, wholesale and retail trade, health care, accommodation and food services, and other service areas. Externally, both the U.S.

and Japanese economies appear to be growing, and should provide further support for the booming local economy.

U.S. Economy

The April 2005 *Blue Chip Economic Indicators'* consensus forecast predicts real gross domestic product (GDP) growth of 3.7% and 3.4% in 2005 and 2006, respectively. The April forecast for 2005 is 0.1 percentage point higher than it was in January, when the economic outlook was last examined in the February 2005 update; the 2006 forecast remains unchanged. The April forecast increased the projection of 1st quarter 2005 GDP growth from 3.5% to 3.9% (see Exhibit 3) on the strength of business investment, consumer spending and residential investment, coupled with an increase in business inventories. In succeeding quarters, real GDP growth is expected to taper off to 3.6%, 3.5%, and 3.3% in the 2nd, 3rd, and 4th quarters, respectively. This is partly attributed to cyclical deceleration following above-trend growth, but also to higher interest rates and higher energy prices.

Job growth was lower than expected with 110,000 new jobs in March, following a 243,000 job gain in February and a 124,000 job gain in January. However, the unemployment rate fell back to a cyclical low of 5.2% and it has remained below 5.6% since June 2004 (see Exhibit 3).

As shown in Exhibit 4, real disposable personal income (DPI) grew by 8.3% in the 4th quarter over the 3rd quarter of 2004, the fastest pace of growth since the 1st quarter of 2002. The 1st quarter of 2005 showed no growth in real DPI over 4th quarter 2004, primarily because of a \$32 billion special dividend paid by Microsoft Corporation in December. However, for the remainder of 2005 and through 2006, the Blue Chip consensus forecast predicts greater than 3% annualized quarterly growth in real DPI. Real personal consumption expenditures for the forecast period exhibit a similar growth rate pattern, but fall to 2.9% in the 4th quarter of 2006.

The nation's powerful housing sector showed signs of weakness as new housing starts fell by nearly 18% in March (see Exhibit 4), which was the steepest drop in more than fourteen years. However, these poor results were tempered by consideration of February's lofty level of housing starts (the highest in twenty years) as the basis of comparison and weather adversely affecting construction. It is expected that the change in housing starts for 2005 will be flat or slightly negative compared to the record year in 2004.

Oil prices surged to new record highs in March, reaching nearly \$60 per barrel even as OPEC members agreed to increase production by 500,000 barrels per day. The average West Texas Intermediate (WTI) crude oil price for the 1st quarter of 2005 was \$49.77 per barrel, approximately \$14.50 per barrel higher than in the 1st quarter of 2004 and \$1.10 per barrel above the 1st quarter 2005 projection in the March Department of Energy report. OPEC's sustained high levels of production contributed to inventory builds through late 2004. Current crude oil inventories in the U.S. and other OECD countries are much improved compared to this time last year and are

more toward the middle of the historic range. Global oil demand is expected to be the key factor in oil markets in 2005, growing by 2.5% over 2004 - 2006. This decrease from the 3.4% demand growth witnessed in 2004 can be attributed to higher world prices and slower projected growth of Chinese oil demand. Crude oil prices are expected to remain above \$50 per barrel for the remainder of 2005 and 2006 (see Exhibit 5) and are likely to remain sensitive to supply tightness during periods of peak worldwide demand. Any disparity in the markets, whether real or perceived, could cause prices to surge above the \$55 per barrel average.

The U.S. Bureau of Labor Statistics estimated that the Consumer Price Index (CPI) increased by 0.6% in March, on a seasonally adjusted basis, after growing by 0.4% in February. For the 1st quarter of this year, the CPI grew at an annual rate of 4.3%, compared with 3.3% for all of 2004. Moreover, "core inflation," the CPI without the volatile food and energy components, grew by 0.4% in March and by 3.3% in the 1st quarter of 2005. It seems that inflation has begun to escalate but some economists demur, citing falling prices for certain commodities.

The Federal Reserve (Fed) again increased the federal funds rate by a quarter percentage point to 2.75% in March. This was the seventh rate increase since June 2004 (see Exhibit 5). The Fed maintained that output appears to be growing at a solid pace despite the rise in energy prices, and that labor market conditions continue to improve gradually. However, it also conceded that although longer-term inflationary expectations appear to be well-contained, pressures on inflation have picked up in recent months. The Fed is expected to continue incrementally raising rates at least through the remainder of this year, but its "measured pace" hinges on upcoming CPI numbers that either corroborate or refute the recent spike as an inflationary trend.

Despite higher energy prices and somewhat disappointing job growth, the positive outlook for the U.S. economy in 2005 has actually improved, albeit slightly. While inflation and other potential problems loom on the horizon, near-term economic prospects remain excellent at this time.

Japan Economy

Japan's economy contracted in the last three quarters of 2004 with weakness in export growth and consumer spending. Robust growth from last year's first quarter was sufficient for real GDP growth to finish at 2.6% for all of 2004. The economy appears to have stabilized and may be able to expand in 2005. The April 2005 Blue

higher than expected growth. Exports to China in March were 5.8% higher than in March 2004, with global exports 6.2% higher than a year ago. This is in contrast with the 2.3% decline in shipments to China in February 2005 after three years of sustained growth. Analysts contend that companies remain cautious due to anemic export growth, inventory adjustments in the technology sector, and high oil prices. One positive sign is in capital spending plans for the fiscal year beginning April 1. Large firms are predicting an increase of 1%, as opposed to a contraction of 1% forecasted by some economists, with the expectation that the recovery will resume by the middle of the current fiscal year.

Hawaii Economy

Hawaii's non-farm job count and real personal income achieved nearly 3% growth in 2004, evidence of the local economy's superlative performance. The expectation for Hawaii's economy in 2005 and 2006 is for continued expansion in jobs led by tourism and construction, followed by wholesale and retail trade, health care, business services, and various other sectors.

Hawaii's unemployment rate in March was once again the lowest in the nation at 2.8%; remaining more than two full percentage points below the national rate of 5.2% (see Exhibit 6). The local rate is expected to inch upward to 3.0% - 3.5% for the year overall as labor force participation rises and hiring slows. The University of Hawaii Economic Research Organization's (UHERO's) March 21, 2005 *Annual Hawaii Forecast* expected non-farm jobs to increase, albeit more moderately in 2005 than in 2004 (2.0% vs. 2.6%, respectively). As the current expansion phase further matures, forecasted job growth tapers to 1.5% in 2006 and 1.3% in 2007 (see Exhibit 7).

In addition to more plentiful jobs, there will be higher income earned in these jobs. UHERO projected 2.7% real personal income growth in 2005, only a slight decline from the 2.8% gain last year. The prosperity continues through 2007 with forecasted growth of 2.6% in 2006 and 2.3% in 2007. Although inflation is on the upswing and forecasted to grow between 3.5% - 3.8% through 2006, it is not expected to erase the gains in purchasing power of Hawaii's residents.

The tourism industry excelled in 2004 as the state approached, but did not surpass, the record of 6.95 million total visitor arrivals set in 2000. In 2005, most observers expect that visitor arrivals will easily exceed 7 million. In fact, the Department of Business, Economic Development and Tourism (DBEDT) projected 7.23 million and 7.43 million total arrivals for 2005 and 2006, respectively in their 1st quarter 2005 *Quarterly Statistical & Economic Report* (see Exhibit 7). Visitor arrivals growth rates in 2005 will be more moderate due to the difficulty of surpassing the high levels set in 2004. Additionally, growth rates may slow as a result of capacity restrictions; hotel room occupancy rates are poised to exceed 80% for all of 2005, the highest rates since 1986.

The construction industry appears to be in the midst of the longest uninterrupted expansion since the 1960's. Growth has been modested, however, in

unlike during the construction boom in the late 1980's, where private residential, non-residential, and public construction all grew quickly and simultaneously. The current construction expansion is marked by lagging growth in the commercial and public sectors, but as these begin to contribute more to overall construction levels, the duration of the current cycle will be extended. Some of the factors leading to construction's growth cycle include moderate but steady local economic expansion, positive net migration and population growth, large investments in Hawaii resort properties by out-of-state second-home buyers, and a remarkable period of low interest rates. UHERO's *Annual Construction Forecast* (March 30, 2005) projected construction put in place to soar in 2005 to 11.0% growth, while commitments to build will actually decline by 13.9% following a 37.7% gain in 2004 (see Exhibit 8). Continuing redevelopments in Waikiki, high-rise condominium developments in Kakaako, and numerous military projects are just part of the larger construction trend. Some possible risks to the construction boom include increased costs of raw materials, labor shortages leading to increased costs of labor, and shocks to the local, U.S., or global economies. The outlook for construction, however, remains notably positive.

Oahu's housing resale market in the 1st quarter of 2005 showed no signs of slowdown from 2004's banner year in price and volume. The median resale price of a single family home reached \$550,000 in March after surpassing the \$500,000 threshold only this past January (see Exhibit 8). As prices rise and inventories shrink, however, buyers may shift into the relatively more affordable condominium market. If interest rates increase in 2005 as expected, it will serve as an additional cost that may further induce interest in condominiums. Despite concerns about higher rates and slowing sales, the overall market appears healthy approaching the busy summer months.

The outlook for military spending in Hawaii also remains positive with construction beginning in 2005 for Stryker Brigade transformation and a C-17 squadron at Hickam. These projects will also result in additional military personnel and dependents moving to Hawaii, as will an additional P-3 squadron assigned to Kaneohe Marine Corps Base Hawaii. Hawaii appears to have avoided any major reassignments of personnel in the Base Realignment and Closure (BRAC) recommendations issued in May 2005 with a possible loss of only about 300 jobs. On the positive side, Pearl Harbor may still serve as homeport to an aircraft carrier and potential realignment of troops away from Europe may benefit Hawaii. The local economy is also expected to benefit as soldiers begin to return from deployments in Iraq and Afghanistan and military housing privatization moves forward.

Economic estimates for 2004 and projections for 2005 - 2006 by DBEDT, UHERO, Bank of Hawaii, and Leroy Laney are shown in Exhibit 9. Both UHERO and DBEDT updated their projections in the 1st quarter of 2005. Hawaii's economy should see gains in jobs and real personal income, but UHERO and DBEDT have accelerated the growth process, reflecting slightly higher growth estimates in 2004 and projections in 2005. Inflation estimates are nearly the same as before. Inflation,

though growing, doesn't appear poised to derail Hawaii's economic expansion in the

Risks to the economic outlook include higher than expected inflation, spurred by rising fuel prices and labor supply tightness, and sudden catastrophic events like terrorism, disease outbreaks, or natural disasters. These risks notwithstanding, Hawaii's economy appears to be at or near the peak of its current expansion, which looks to continue for the next two to three years.

March Year-To-Date Sales Performance

March year-to-date (YTD) 2005 recorded sales of 1,789.2 GWh were 1.3% or 23.7 GWh lower than 2004, as shown in Exhibit 10. 2005 temperatures year-to-date were cooler than 2004 and the 1976 – 2004 average. Adjusting for weather, sales growth was almost flat compared to 2004, increasing by only 8.6 GWh or 0.5%. The 1st quarter of 2004 also included an extra leap year day. The one less day in 2005 also reduced sales growth by about 1.1% in the 1st quarter when compared to the same period in 2004. Adjusting for weather and the leap year day, sales were 1.6% higher than 2004 in the 1st quarter. Exhibit 10 also shows that the 1st quarter of 2005

Residential (Schedules R and E)

Residential recorded sales saw year-over-year decreases in the 1st quarter, falling by 1.3% or 6.5 GWh below 2004. After strong growth through 2004, residential sales growth suddenly softened in the beginning of 2005. The decrease in residential sales was due to an average residential use per bill decline of 2.1%, (see Exhibit 12). Average residential use per customer suddenly slowed in the beginning of 2005 despite continued strength in consumer disposable income and a strong local economy. Cooler weather in 2005 and the additional leap year day in 2004 likely contributed to the decline in residential use. However, adjusting for weather and the leap year, residential use still decreased by 0.3%.

Relatively low mortgage interest rates have continued to stimulate residential home market activity, but construction and occupation of new homes have continued at a relatively slow pace. While the average number of customers continued to grow at a moderate 0.9%, customer additions in the 1st quarter of 2005 averaged only 2,213, and were lower than the 2,682 customer growth experienced in the 1st quarter 2004 over 2003. The 2005 Report 1 forecast lowered the rate of customer additions relative to previous forecasts; however, residential customer growth has still not been as strong as expected. The rise in the number of customers hasn't been at the levels expected based on housing demand and building permits issued; possibly because housing developers are unable to build homes fast enough to keep up with demand due to resource constraints for construction workers and construction materials.

Commercial (Schedules G, J, H, P, and F)

March YTD 2005 recorded commercial sales decreased by 1.3% or 17.2 GWh compared to the same period in 2004, as shown in Exhibit 10. On a weather normalized basis, commercial sales actually grew by 11.4 GWh or 0.9% above 2004.

As shown in Exhibit 13, only four of the business sectors experienced higher billed sales in the 1st quarter of 2005. As mentioned before, much of the decrease was due to cooler weather, but it also indicates that the underlying growth in sectors was relatively weak. The manufacturing sector saw a 42% increase over 2004, but much of this was due to maintenance on Tesoro's co-gen units which resulted in their load being on HECO's system. The maintenance was completed in March and this higher load is not expected to be seen for the remainder of the year.

The biggest declines were seen in the education, housing, and hotel sectors. Electricity sales in the education sector, until last year one of the strongest growing business sectors, was hurt by carryover load loss in the wake of the October 30, 2004 Manoa flooding. The University of Hawaii at Manoa continues to use generators to provide electricity to the Biomed building and Hamilton Library. The Biomed building should be back on HECO power by June, but Hamilton Library is likely to be on generator power until mid-2006. Decreases in the housing sector appear to be similar to the lower use per customer seen in the residential sector. The hotel sector has seen strong occupancy rates and higher than 2004 visitor arrivals in the 1st quarter of

2005, but the beginning of the Outrigger Beach Walk project has closed several smaller hotels on Lewers street.

Total Sales

In summary, year-over-year sales growth has been weak in the 1st quarter of 2005; partly due to cooler weather and one less day in 2005 (2004 was a leap year). The residential sector in particular has been lower due to declining use per customer. The commercial sector was also lower than 2004 in the 1st quarter, but slightly higher when cooler weather is considered.

Mortgage interest rates remain below 6%, growth in personal income remains strong, and unemployment levels remain low, all of which may support eventual growth in the residential sector for 2005. New home construction continues at a strong pace and increased penetration of air conditioning is expected to continue as homes are built in the Ewa plains and modestly priced air conditioning is available. The commercial sector should see improvement as the local economy grows and military construction activity accelerates in the second half of 2005. Proposed excise tax increase and higher city sewer fees could erode consumer spending which might affect both residential use and commercial sales.

2005 – 2010 Sales Forecast

Residential Sales (including Schedule E – Employees)

The May 2005 residential sales forecast is higher than the Report 1 forecast. The increase in the residential forecast is due to expected higher use per customer, offset somewhat by customers in the May 2005 forecast being added at a slower pace than in the Report 1 forecast.

Residential use per customer saw higher than Report 1 projected growth in 2004. Interest rates are expected to remain near historically low levels in the near-term, and this will continue to support residential sales. In addition, HECO's residential appliance survey indicated that air conditioning saturation climbed 6 percentage points, from 48% to 54% between surveys taken in 2002 and 2004. The Report 1 projected use per customer was increased to reflect the higher than expected level in 2004, and continued penetration of air conditioning in the residential sector. The May 2005 forecast expects residential sales growth over 2004 levels, improving by the end of 2005 after a slow 1st quarter start. The 2005 – 2010 residential sales, customers, and use forecasts are shown in Exhibit 14 (excluding the impact of the Bill 53 building code discussed later). The forecast of residential sales includes the impact of additional Schedule R customers due to the conversion of Kukui Gardens from a master metered commercial account to individual residential meters. The Kukui Gardens conversion began on May 16, 2005 and is expected to be completed by July, 2005.

Commercial Sales (excluding Schedule F – Street Lighting)

The 2005 – 2007 commercial sales forecast is based on an analysis of sixteen commercial sectors (as shown in Exhibit 15). This forecast method looks at two main sources of change in commercial sales: (1) underlying trends by sector, and (2) load changes due to large projects, primarily through new construction. The short-term economic outlook, industry trends, and recent growth rate history are analyzed by sector. This information is used to determine the underlying growth rate for the sector. Load growth from new construction projects is also determined. These loads are estimated using information from various sources, such as news publications, Marketing Services contacts, and service requests. Large projects included in this forecast are shown in Exhibit 16. The following is a brief description of the short-term outlook in each of the commercial sectors examined.

Posting a 1.1% year-over-year weather normalized gain for the 1st quarter, the office sector is in step with the rest of the economy and is supported by the growth in number of office jobs and the increase in the absorption rate. Fueled by upbeat economic projections including solid job and personal income growth, office space continues to be in high demand. In 2004, nearly 224,000 square feet of additional office space was leased, resulting in a decline of vacancy rates to 10.3% overall. This is approaching a 'target market equilibrium vacancy level' of 10% where rent prices will start to increase. Asking rents are already on the rise with an increase of 3.7% in 2004, the highest rise in the past decade. Because very few new office projects have come online in recent years, the demand for existing office space will continue to rise as companies in expansion mode may have already better utilized their "shadow" spaces and will now seek to sublease additional space or move to larger quarters. This will be tempered somewhat by the increasing competition for skilled workers in a growing economy, higher rents, and less available space. For these reasons, a continued, but controlled growth of less than 1% in the office sector is anticipated for the 2005 - 2007 period.

Continued projections of strong tourist arrivals and growth in the local economy for 2005 - 2007 will support restaurant activity. Existing restaurants have seen moderate increases for 1st quarter 2005 over 1st quarter 2004 on a weather normalized basis. Increasing tourist arrival levels and gains in personal income should support the restaurant sector in the short-term. Smaller restaurants are opening within existing developments in Honolulu with larger restaurants developing where the population is growing in Kapolei and Kunia. Waikiki should also begin to see more restaurant growth, especially after 2007 when the Outrigger Beach Walk project is completed. Moderate growth is expected to continue in this sector through 2007.

Short-term growth in the retail sector is being driven by several large projects to be completed during 2005 - 2007, including a Wal Mart, a CompUSA/Good Guys, and two Best Buys. Waikiki is seeing renewed growth because of the recovery of tourist arrivals. Projects include a retail center for the Outrigger Beach Walk project, rebuilding the International Marketplace, and converting the Waikiki Theater to retail.

Strong residential development and real personal income growth should continue to support retail demand across Oahu.

The grocery sector saw growth year-over-year for 2004 as well as in the 1st quarter 2005 over the same period in 2004. There have been few new stores opening, and most future growth is expected to occur from existing customers. Some consolidation in this sector may take place due to the continued popularity of bulk stores such as Costco and Sam's Club. There should be increased demand for grocery stores in leeward and central Oahu as new housing developments there continue. Smaller niche stores may also find a place in the market. For example, the lease for the Star Market Kahala store ends in March 2007 and there is a possibility that a gourmet products vendor may replace it. The only large new project in the forecast is Safeway, who is in the process of securing permits for a Kapahulu location expected to open after 2007.

Local construction activity and an expanding economy have increased the demand for warehouse space. The state's development of the Kakaako area displaced several companies who completed new facilities in 2004. Rising land prices and higher construction costs are expected to continue.

Clinic. In 2006 - 2007, growth rates are forecasted to be 1.9% and 1.8%, respectively. Kaiser recently announced plans to add a 5-story building to its Moanalua campus with an expected occupancy date of 2009, increasing its bed capacity by about a third.

The hotel sector is forecasted to grow by 1.4% in 2005 compared with 2004. Tourism did extremely well in 2004, and 2005's projected growth rate reflects a stabilization period for this sector. As shown in Exhibit ____ 2005 growth rates for total visitor arrivals are expected to be about half of 2004's rate, while DBEDT's February 2005 quarterly update projects similar trends in growth rates for 2005 visitor days and visitor expenditures. The 2006 - 2007 forecasted growth rates for the hotel sector are 0.3% and 2.7%. Smaller hotels are being converted to residential projects and/or timeshares. Several Outrigger hotels in the Lewers Street area have been closed for demolition as part of the Beach Walk project. Several new hotels at Ko Olina are also projected to open in the late 2007 - 2009 period.

The housing sector has emerged as one of the future growth areas as construction of major condo projects near completion. The first of the large condominium projects is expected to begin service in late 2005. The Hokua and Lanikea projects are both expected to be completed by the end of 2005. 2006 and 2007 will also see a marked increase in new large customers with estimated incremental sales of 30 GWh in 2006 and 25 GWh expected in 2007, with the opening of new projects such as Ala Wai Gateway, Moana Pacific, Koolani and 909 Kapiolani. The majority of the proposed condo projects are being marketed as high-end properties with unit prices ranging from \$400,000 to well over \$1 million. Although sector sales declined slightly in the 1st quarter by 1.2%, this trend is expected to be reversed by year-end as residential use improves and the new projects begin to build load. Growth rates are projected to rise sharply in the near term forecast period.

The services & amusement sector growth is expected to see relatively flat growth in 2005. This sector has been stable over the last few years despite robust visitor arrivals and a healthy economy. The Bishop Museum Science Learning Center is expected to be complete in late 2006. With the continued strength in the economy and growth from projects, 2006 and 2007 are expected to increase by 1.4% per year.

Air facilities have seen very little change as increases for new security equipment have been offset by closing off areas for security purposes. Domestic arrivals remain strong and international arrivals are expected to continue to see significant growth in 2005. While visitor arrivals saw strong growth in 2004, use at the Honolulu International Airport was flat and additional arrivals are not expected to rapidly change electricity use. Aging facilities are receiving renewed attention, and renovations are slated for the next few years which may temporarily offset arrivals growth. A new baggage inspection system and integration of the electrical systems at the Honolulu International Airport are expected to begin increasing load around the end of 2006.

The outlook for the manufacturing sector continues to be bright because of the strength of the construction industry. Increases appear to be high in the beginning of 2005, but this was due to the cement strike decreased electricity use in the first four months of 2004 and Tesoro was on HECO's system in late 2004 and early 2005 while maintaining its co-gen units. This growth is not expected to continue at that level through 2005. In 2004, the Honolulu Advertiser opened its Kapolei plant and Air Liquide resumed operations after 3 years of inactivity. Although use at the Advertiser's Kapiolani plant decreased, it has not dropped off as fast as previously expected. No new major projects are expected except that Chevron is projected to add units to its co-gen plant and take its refinery off HECO's system by 2006. Excluding the impact of Chevron, the sector is expected to see strong growth with continued activity in the construction industry.

Pumping loads will need to increase as Oahu's economy expands, tourist arrivals improve, and construction activity continues. The first phase of the Sand Island wastewater treatment plant upgrades related to compliance with EPA standards were energized in the beginning of 2005 and are expected to begin increasing loads in 2005, but at lower levels and slower timing than in previous forecasts. Other plants are likely to require eventual upgrading as well, and the new City administration has announced its intention to focus on sewer system upgrades. BWS use continues to be low due to higher than average rainfall and well maintenance. Use will eventually increase as maintenance is completed and additional pumps are added to the system. The BWS desalination plant was expected to be operational in the 3rd quarter of 2006, but the change in the City administration and other factors appear to have put this project on hold indefinitely.

The military sector saw the most growth in 2004 of all of the commercial sectors, because of the new PACOM headquarters at C. C. Smith.

On the upside, increased visitor arrivals, a growing residential housing market and increased military presence will improve this sector's outlook.

Temporary construction accounts will increase the other sector in the short term. With the construction boom expected to continue for several years, this sector will continue to see moderate growth over the near-term. Street lighting for new developments is also expected to increase use in this sector.

The business sector forecast extends out to 2007, the forecast horizon over which this methodology is believed to appropriately project sales. The timing and projected loads from new construction projects introduces risks in the forecast, especially in the military sector because of the magnitude of the projects. Annual growth rates derived from a commercial sales econometric model are used to project sales beyond 2007. The commercial sales forecast for 2005 – 2010 reflects the strength in Oahu's economy that began in 2003 and the expected increases due to military construction projects. Economic growth is assumed to be steady and moderate over the forecast horizon.

Street Lighting (Schedule F)

Street lighting electricity use is a very small part of HECO's total sales and tends to fluctuate up and down from year to year. Many street and traffic lights are not metered and are billed on a flat use basis. Periodically the flat use accounts are evaluated and their usage is adjusted for future and prior periods. This adjustment tends to result in swings in sales. While growth is expected to continue in street lighting sales because of new housing developments, this may be offset by efficiencies gained through improvements in lighting technology. As a result, street lighting sales are expected to be flat throughout the forecast horizon.

C&C Honolulu Bill 53 & 54 Impacts

The City & County of Honolulu passed Bills 53 & 54 in late 2001 and the law became effective December 8, 2001. These ordinances mandate increased equipment and building shell energy efficiencies for residential and commercial buildings, consistent with the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 90.1 (1999). The impacts from these bills were estimated based on information obtained from the Department of Business, Economic Development, and Tourism (DBEDT), and remain the same as those used in the previous sales forecasts.

Economic Development Rate

HECO decided in 2005 to withdraw an application pending with the PUC for a Rider EDR - Economic Development Rate, which proposes energy rate adjustments to qualified customers in an effort to encourage economic growth and diversification in Hawaii. Sales impacts from this program were included in previous forecasts but are excluded from the May 2005 forecast.

Combined Heat and Power Generating Units

This forecast includes the impact of combined heat and power (CHP) generating units, both HECO and 3rd party owned, from Energy Projects' March 9, 2005 projections and are consistent with estimates used for the HECO rate case (Docket No. 04-0113). Several 3rd party co-generators are already in operation, and their impacts were included in the historical data used to derive the forecast, including Honolulu Hale's co-gen installation which began operating in early 2004. An additional 3rd party CHP is expected to be installed in 2005, and the first utility CHP project is anticipated to be operational in 2006. Several additional utility and 3rd party CHP units are projected to be installed on Oahu during the forecast horizon and their impacts are shown in Exhibit 17. The May 2005 sales forecast assumes some electricity sales will be lost as the heat recovery system of the CHP replaces a portion of hot water and air conditioning load. The majority of the customer's load is expected to remain on HECO's system, and is treated as electricity sales in the forecast. Besides the losses from the heat recovery systems, the impacts from the utility CHP installations are not included in the forecast as reductions to projected peaks.

Future DSM

Future DSM impacts assume that current programs are extended and accelerated, and new programs will be added. The proposed programs and impacts are consistent with those filed in HECO's Energy Efficiency Docket No. 05-0069, but assumes a ramped impact beginning in July 2005. The forecast excludes load management programs, which are considered supply-side resources available to meet projected loads.

Total System Sales

The forecast of total HECO system sales is shown in Exhibit 18. In 2005, total weather normalized sales are projected to increase 0.9% over recorded 2004 sales. Sales are projected to increase by a stronger 2.6% and 2.3% in 2006 and 2007, respectively. Sales are expected to grow more slowly after 2007, increasing at an annual average of 1.3% through 2010.

The outlook for the local economy remains positive with the tourist arrivals rebound from 2004 continuing in 2005, especially international arrivals. Combined with continued strength in the construction and real estate industries and growing military spending, the local economy should see stable growth during the forecast horizon. A strong U.S. economy supported by continued job and income growth should sustain domestic arrivals, provided high oil prices and stable interest rates continue.

Residential use is expected to resume moderate growth in the latter half of 2005. Some of the housing demand seems to have shifted to the condo market which will support the lagging commercial side of the construction industry. The military sector is expected to see growth with the beginning of projects related to the Stryker Brigade transformation, C-17 squadron, and military housing privatization (see Exhibit 19). The homeport of an aircraft carrier is assumed to begin affecting sales in July 2009.

The weather normalized forecast is lower than the June 2004 sales update in 2005 and 2006, but higher beginning in 2007. As shown in Exhibit 20, the forecast is 43.3 GWh and 20.6 GWh lower than the June 2004 update for 2005 and 2006, respectively. This decrease is due to lower expected commercial sales, primarily due to expected delays and lower loads for some large projects. Also contributing to the lower projections in the May 2005 forecast were lower than expected results for the 1st quarter of 2005, including the impact of the UH Manoa flood. This decrease is somewhat offset by expectations that residential use per customer will recover after year-over-year declines in the 1st quarter of 2005 and show improvement over the levels forecasted in the June 2004 update.

On an operational basis, in which the March year-to-date weather normalized sales that are included in the forecast are replaced by recorded non-weather normalized sales, 2005 sales are projected to be 0.8% higher than recorded 2004 (see Exhibit 21).

2005 – 2010 Peak Forecast

The record system peak of 1327 gross MW was set on October 12, 2004. The May 2005 peak forecast is shown in Exhibit 22, along with a comparison to the Report 1 (June 2004 update) peak forecast.

The May 2005 forecast peaks were derived using the Hourly Electric Load Model (HELM) and weather normalized load profiles from the 2003 Class Load Study. In the February 2004 peak forecast, weather normalized, adjusted day of week load profiles were used from the 1998 Class Load Study. Weather normalization was done using regressions fit for the 1988 – 1997 period at 3 hour intervals because of incomplete NOAA hourly data. The June 2004 peak update assumed the same load factors from the February 2004 peak forecast in deriving the peak forecast.

The 2003 class load study profiles used in this forecast were weather normalized by a different process. The weather impact was determined using hourly regression equations fit for the 1997 – 2003 period by HECO's consultant, RLW Analytics, Inc. The profiles were normalized assuming the "typical" weather was the Department of Energy's Typical Meteorological Year (TMY) derived from the 1961 – 1990 period. HELM forecasts were then calibrated to historical peaks weather normalized assuming "typical" 1997 – 2003 weather. The calibration to 1997 – 2003 weather normalized peaks was performed because cooling degree days for this more

current time period closely matched the 1976 – 2004 average used to weather normalize sales and reflected the fact that the weather station had been moved from downtown to Honolulu International Airport in 1976. The peaks were then taken from an integrated level to instantaneous peaks using a 2000 – 2004 average factor. The peaks were further adjusted for the expected demand from large projects including the aircraft carrier, Stryker Brigade transformation projects, the C-17 squadron facilities, Ko Olina resort, etc. The impact of DSM, possible self- and co-generator outages, and CHP were also included.

Tesoro, Chevron, and Pearl Harbor have large, pre-existing, self- and/or co-generators. The additional coincident demands placed on HECO's system when these co-generators are experiencing outages were re-evaluated using demand data through December 2004. 2004 data indicated total system peak coincident demand from Tesoro and Chevron was 24 MW, higher than the 19 MW seen previously in data through 2003. 2 MW was also included assuming an outage in one of Pearl Harbor's peak load units. The resultant total standby load of 26 MW is further increased by 2 MW to 28 MW for 2006 and beyond under the assumption that Chevron will add new co-gen units to cover their entire refinery use. This 2 MW increase in 2006 covers the load that is currently regularly on HECO's system (above the outage coincident demand). The impact of Tesoro and Chevron vary depending on the month of the year, thus the standby impact is calculated separately for the AM and PM peaks as shown in Exhibit 23. The interruptible loads under Rider I were also re-examined and are shown in Exhibit 24.

The gross and net peak and minimum forecasts including adjustments for standby and co-generation loads are shown in Exhibit 25. The projected system peak is lower than the Report 1 forecast by 11 MW in 2005, then higher by 1 MW in 2006, and continues to be higher thereafter, as shown in Exhibit 22. The projected system peaks are lower than the Report 1 forecast in 2005 because projected sales are lower than Report 1 in 2005. The forecast peak is slightly higher in 2006 only because of the higher standby load assumed in the May 2005 forecast. Without the higher standby load than in the June 2004 update, the 2006 forecast peak would be 6 MW lower. Forecast peaks remain higher in 2007 and beyond, in line with the higher sales projections for the period.

Recommendation

For financial planning purposes, it is recommended that the company approve the 2005 - 2010 total sales, peak, and purchased energy forecast shown in Exhibit 25.

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EXHIBIT 1

Hawaiian Electric Company, Inc.
MAY 2005 SALES FORECAST

	Recd <u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Sales Forecast with Adjustments, No Future DSM							
Residential	2,151.3	2,193.9	2,239.3	2,268.2	2,313.7	2,344.6	2,368.0
% incr		2.0%	2.1%	1.3%	2.0%	1.3%	1.0%
Commercial	5,543.9	5,583.4	5,787.4	5,992.5	6,108.5	6,204.2	6,363.0
% incr		0.7%	3.7%	3.5%	1.9%	1.6%	2.6%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,814.9	8,064.3	8,298.3	8,459.9	8,586.4	8,768.6
% incr		1.1%	3.2%	2.9%	1.9%	1.5%	2.1%
Future DSM							
Residential		-4.7	-20.9	-39.6	-58.4	-77.1	-95.8
% incr							
Commercial		-10.7	-40.6	-70.5	-100.4	-130.3	-160.2
% incr							
Sched F		0.0	0.0	0.0	0.0	0.0	0.0
% incr							
Total		-15.4	-61.5	-110.1	-158.8	-207.4	-256.0
% incr							
Recommended Sales Forecast with Future DSM							
Residential	2,151.3	2,189.2	2,218.4	2,228.6	2,255.3	2,267.5	2,272.2
% incr		1.8%	1.3%	0.5%	1.2%	0.5%	0.2%
Commercial	5,543.9	5,572.7	5,746.8	5,922.0	6,008.1	6,073.9	6,202.8
% incr		0.5%	3.1%	3.0%	1.5%	1.1%	2.1%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,799.5	8,002.8	8,188.2	8,301.1	8,379.0	8,512.6
% incr		0.9%	2.6%	2.3%	1.4%	0.9%	1.6%

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EXHIBIT 2

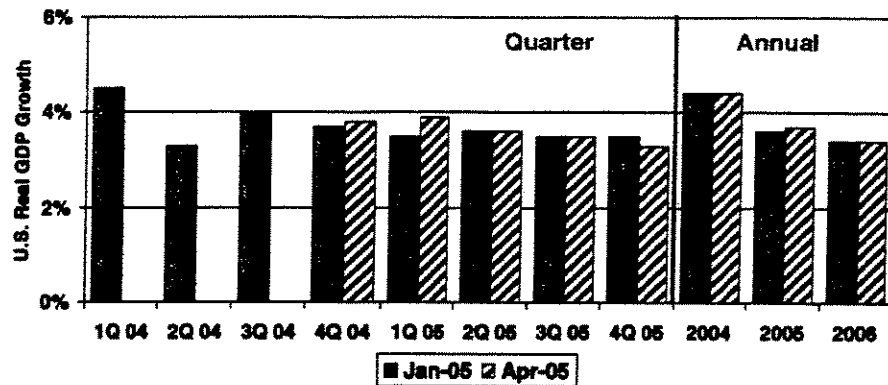
Hawaiian Electric Company, Inc.
Comparison of May 2005 Sales Forecast vs. June 2004 Sales Update (Report 1)

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
May 2005 Sales Forecast (Reduced by Future DSM)							
Residential	2,151.3	2,189.2	2,218.4	2,228.6	2,255.3	2,267.5	2,272.2
% incr		1.8%	1.3%	0.5%	1.2%	0.5%	0.2%
Commercial	5,543.9	5,572.7	5,746.8	5,922.0	6,008.1	6,073.9	6,202.8
% incr		0.5%	3.1%	3.0%	1.5%	1.1%	2.1%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,799.5	8,002.8	8,188.2	8,301.1	8,379.0	8,512.6
% incr		0.9%	2.6%	2.3%	1.4%	0.9%	1.6%
June 2004 Sales Update (Reduced by Future DSM)							
Residential	2,108.0	2,145.7	2,156.8	2,167.7	2,180.3	2,189.5	
% incr		1.8%	0.5%	0.5%	0.6%	0.4%	
Commercial	5,513.3	5,656.8	5,825.7	5,947.6	5,992.8	6,040.4	
% incr		2.6%	3.0%	2.1%	0.8%	0.8%	
Sched F	39.8	40.3	40.9	41.5	42.2	42.7	
% incr		1.3%	1.5%	1.5%	1.7%	1.2%	
Total	7,661.1	7,842.8	8,023.4	8,156.8	8,215.3	8,272.6	
% incr		2.4%	2.3%	1.7%	0.7%	0.7%	
May 2005 less June 2004							
Residential	43.3	43.5	61.6	60.9	75.0	78.0	
Commercial	30.6	-84.1	-78.9	-25.6	15.3	33.5	
Sched F	-2.2	-2.7	-3.3	-3.9	-4.5	-5.1	
Total	71.7	-43.3	-20.6	31.4	85.8	106.4	

Note: Includes DSM, CHP, and leap year impacts.

EXHIBIT 3

Robust U.S. Economy



Source: Blue Chip Economic Indicators

National Unemployment at Cyclical Low

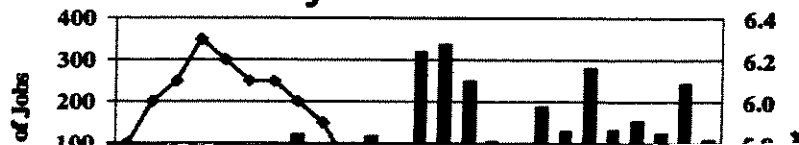
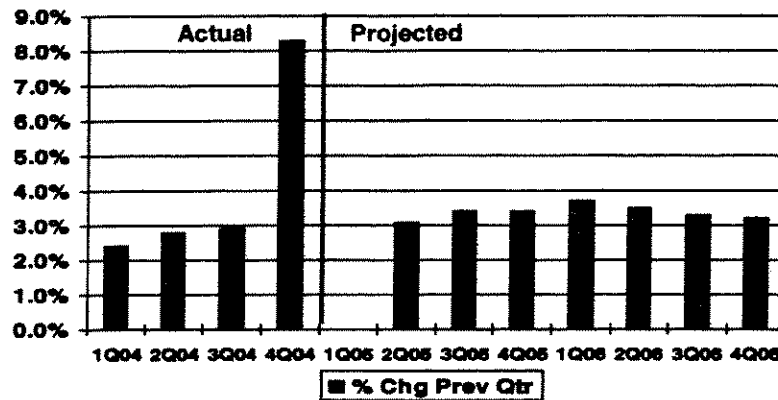


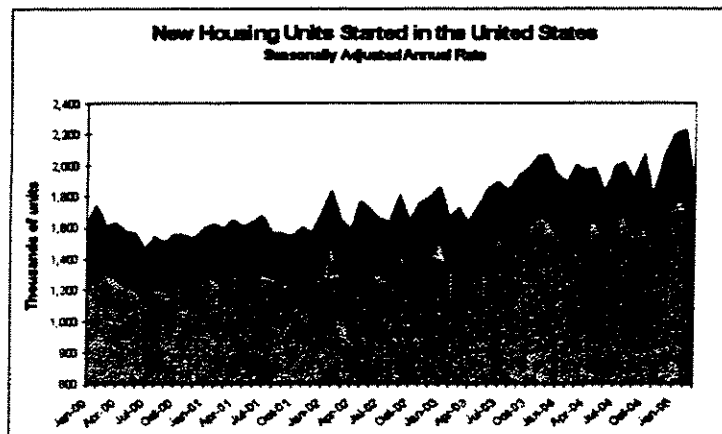
EXHIBIT 4

Projected Gains in Real Disposable Personal Income



Sources: U.S. Dept of Commerce, Bureau of Economic Analysis
Blue Chip Economic Indicators, April 2005

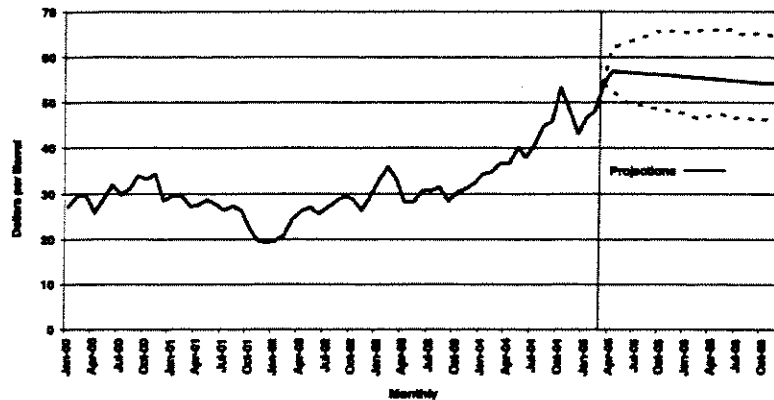
Housing Starts Plummet in March



Source: U.S. Census Bureau

EXHIBIT 5

DOE Expects High Prices Through 2006



*The confidence intervals show ± 2 standard errors based on the properties of the model. The ranges do not include the effects of major supply disruptions.

Short-Term Energy Outlook, April 2006



The Fed's Measured Pace

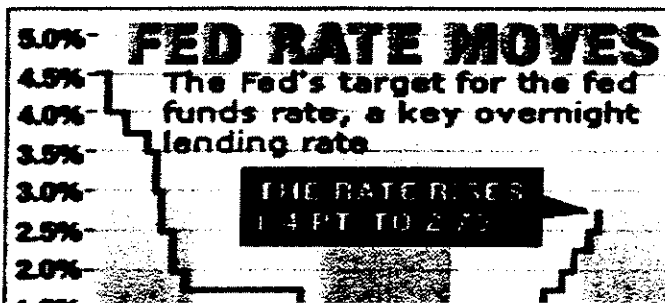
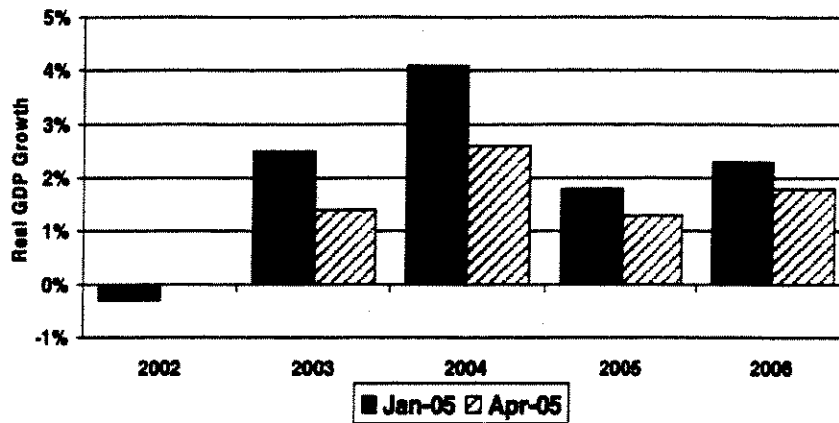


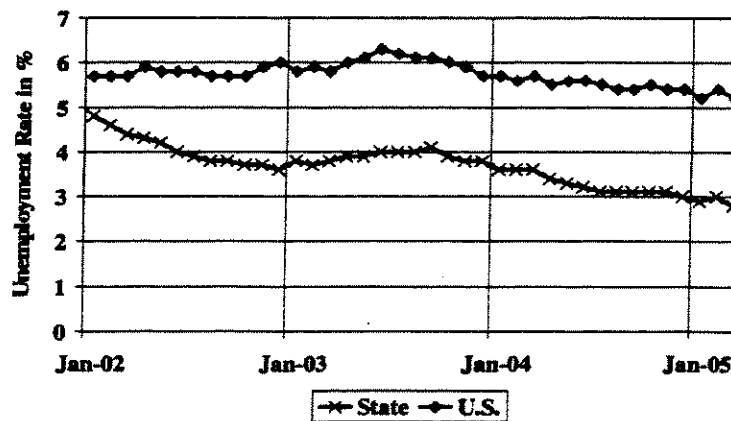
EXHIBIT 6

Modest Growth for Japan's Economy



Source: Blue Chip Economic Indicators

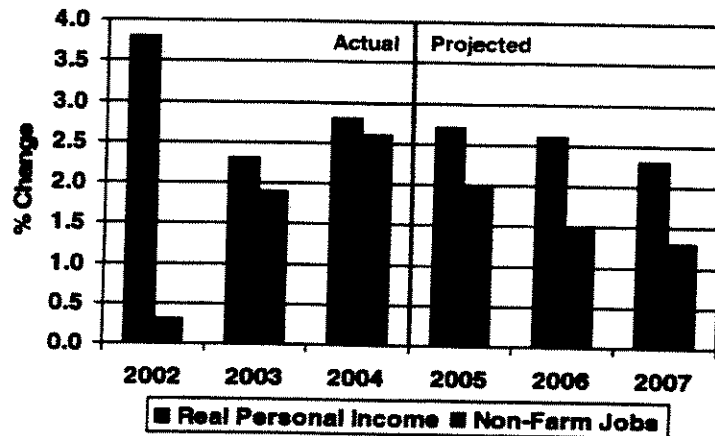
Hawaii's Unemployment Lowest in U.S.



Note: Seasonally adjusted

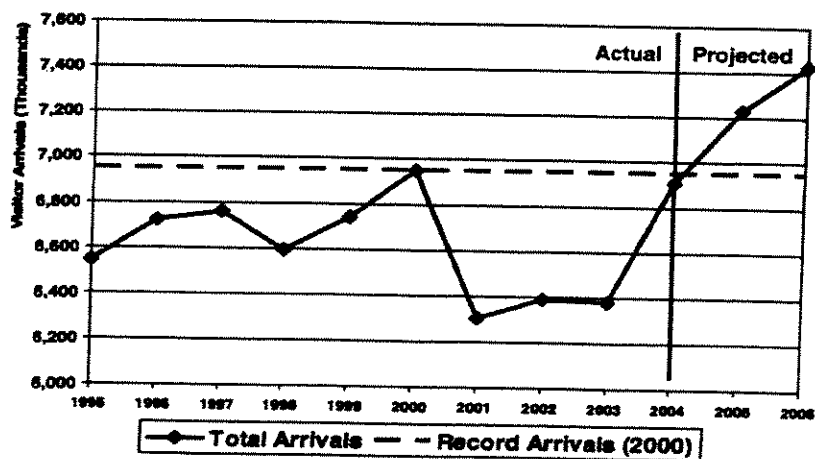
EXHIBIT 7

Real Income and Job Growth



Source: UHERO, March 2005

Tourism Set to Top Seven Million



Source: DBEDT, IQ 2005 QSER

EXHIBIT 8

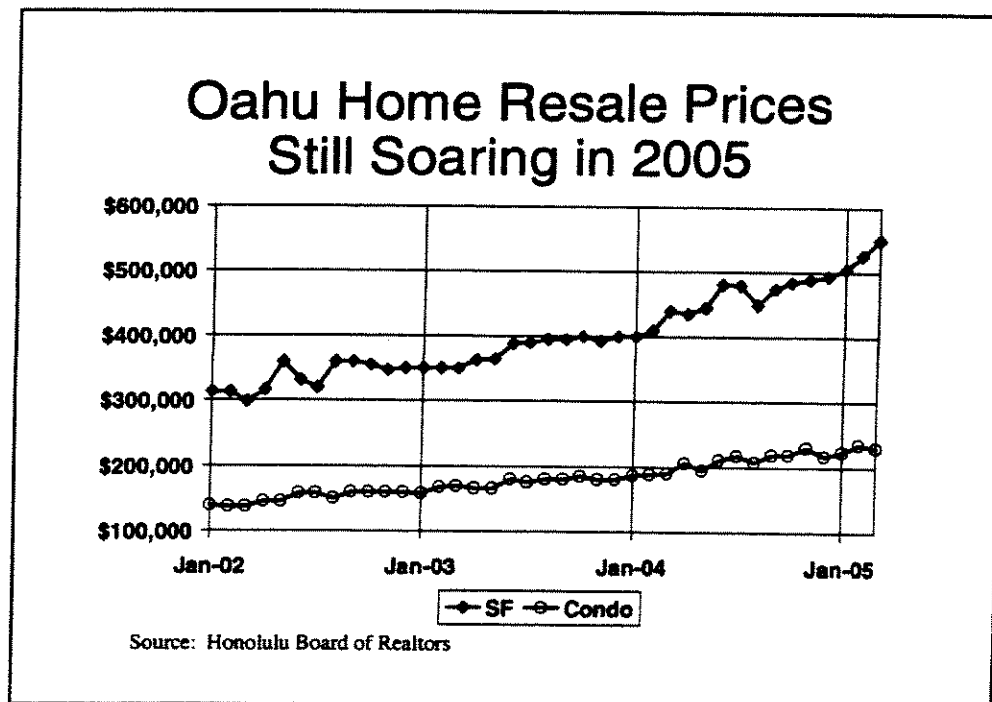
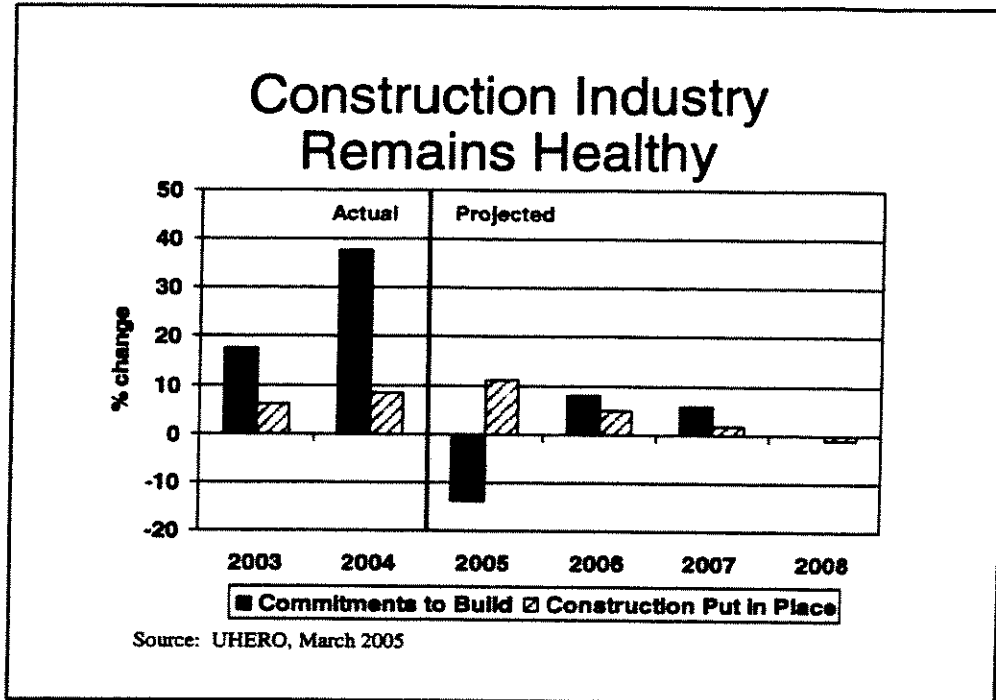


EXHIBIT 9

COMPARATIVE 2004-06 HAWAII ECONOMY FORECASTS
ANNUAL PERCENTAGE CHANGE

	Jobs			Employment			Real Pers Income			CPI		
	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
Actual												
BOH ¹	2.4	1.8	1.4				2.3	1.9	2.5	3.8	4.0	3.3
UHERO ²	2.6	2.0	1.5	1.2	1.6	1.8	2.8	2.7	2.6	3.3	3.8	3.6
Laney ³	2.0	2.2					2.8	3.1		3.4	3.7	
DBEDT ⁴	2.6	1.8	1.3				2.6	2.7	2.6	3.3	3.2	2.9

	Construction ⁵			Total Visitor Arrivals			Domestic Arrivals ⁶			International Arrivals ⁷		
	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
Actual												
BOH ¹				8.0	5.2	4.2	6.1	4.0	2.9	12.7	8.0	7.2
UHERO ²	8.5	11.0	4.8	8.0	4.9	1.6	6.5	4.0	1.0	10.3	8.0	3.2
Laney ³				7.0	3.0							
DBEDT ⁴				8.5	3.4	2.8						

- ¹ Paul Brewbaker, Chief Economist (Bank of Hawaii), December 23, 2004, <http://www.boh.com/econ/pdfs/econ1204.pdf>
² Professors Carl Bonham and Byron Gangnes (University of Hawaii Economic Research Organization), March 21, 2005
³ Professor Leroy Laney (Hawaii Pacific University) FHB Economic Forecast 2004-2005 Edition, http://www.fhb.com/pdf/oahu_ef_0405.pdf
⁴ Hawaii DBEDT Quarterly Forecast, February 23, 2005
⁵ Construction put in place, UHERO Annual Construction Forecast, March 30, 2005
⁶ UHERO projections for U.S. arrivals
⁷ UHERO projections for Japan arrivals

EXHIBIT 10
PAGE 1 OF 2

Hawaiian Electric Company, Inc.

COMPARISON OF 2005 VS. 2004
1ST QUARTER
Recorded GWh Sales

Schedule	1st Quarter 2005	1st Quarter 2004	Diff	% Diff
R	503.4	509.9	-6.5	-1.3%
G	84.4	85.9	-1.5	-1.7%
J	463.9	456.1	7.8	1.7%
H	12.9	13.9	-1.0	-7.2%
P	715.2	737.7	-22.5	-3.1%
F	9.4	9.4	0.0	0.0%
Total	1,789.2	1,812.9	-23.7	-1.3%
Commercial ²	1,285.8	1,303.0	-17.2	-1.3%

Schedule	Weather Normalized ¹ 1Q 2005	Weather Normalized ¹ 1Q 2004	Diff	% Diff
R	504.2	507.0	-2.8	-0.6%
G	84.8	84.4	0.4	0.5%
J	466.0	448.1	17.9	4.0%
H	13.0	13.7	-0.7	-5.1%
P	718.5	724.7	-6.2	-0.9%
F	9.4	9.4	0.0	0.0%
Total	1,795.9	1,787.3	8.6	0.5%
Commercial ²	1,291.7	1,280.3	11.4	0.9%

¹ Weather normalization method reflects an annual MWh adjustment per cooling degree day based on 2002 as follows:

	2005	2004
1Q YTD Cooling Degree Days	780	912
1976-04 Annual Average CDD	807	807
Commercial (MWh per CDD)	216.6	216.6
Residential (MWh per CDD)	27.9	27.9

² Includes Schedule F

EXHIBIT 10
PAGE 2 OF 2

Hawaiian Electric Company, Inc.

COMPARISON OF 2005 VS. 2004
APRIL YEAR-TO-DATE
Recorded GWh Sales

Schedule	Apr YTD 2005	Apr YTD 2004	Diff	% Diff
R	671.7	676.8	-5.1	-0.8%
G	114.4	115.5	-1.1	-1.0%
J	623.6	613.3	10.3	1.7%
H	17.1	18.6	-1.5	-8.1%
P	964.9	986.1	-21.2	-2.1%
F	12.6	12.6	0.0	0.0%
Total	2,404.3	2,422.9	-18.6	-0.8%
Commercial ²	1,732.6	1,746.1	-13.5	-0.8%

Schedule	Weather Normalized ¹ Apr YTD 05	Weather Normalized ¹ Apr YTD 04	Diff	% Diff
R	670.3	673.1	-2.8	-0.4%
G	113.7	113.6	0.1	0.1%
J	619.8	603.1	16.7	2.8%
H	17.0	18.3	-1.3	-7.1%
P	958.9	969.7	-10.8	-1.1%
F	12.6	12.6	0.0	0.0%
Total	2,392.3	2,390.4	1.9	0.1%
Commercial ²	1,722.0	1,717.3	4.7	0.3%

¹ Weather normalization method reflects an annual MWh adjustment per cooling degree day based on 2002 as follows:

	2005	2004
April YTD Cooling Degree Days	1199	1283
1976-04 Annual Average CDD	1150	1150
Commercial (MWh per CDD)	216.6	216.6
Residential (MWh per CDD)	27.9	27.9

² Includes Schedule F

EXHIBIT 11

Hawaiian Electric Company, Inc.

COMPARISON OF RECORDED VS. REPORT 1 FORECAST ¹
MARCH YEAR-TO-DATE 2005
Recorded GWh Sales

Schedule	Mar YTD 05 Recorded	Report 1 Forecast	Diff	% Diff
R	503.4	516.8	-13.4	-2.6%
G	84.4	87.3	-2.9	-3.3%
J	463.9	464.8	-0.9	-0.2%
H	12.9	11.4	1.5	13.2%
P	715.2	747.5	-32.3	-4.3%
F	9.4	10.2	-0.8	-7.8%
Total	1,789.2	1,838.0	-48.8	-2.7%
Commercial ³	1,285.8	1,321.2	-35.4	-2.7%

Schedule	Weather Normalized ² Mar YTD 05	Report 1 Forecast	Diff	% Diff
R	504.2	516.8	-12.6	-2.4%
G	84.8	87.3	-2.5	-2.9%
J	466.0	464.8	1.2	0.3%
H	13.0	11.4	1.6	14.0%
P	718.5	747.5	-29.0	-3.9%
F	9.4	10.2	-0.8	-7.8%
Total	1,795.9	1,838.0	-42.1	-2.3%
Commercial ³	1,291.7	1,321.2	-29.5	-2.2%

¹ June 2004 Sales Update

² Weather normalization method reflects an annual MWh adjustment per cooling degree day as follows:

	<u>2005</u>
Mar YTD Cooling Degree Days	780
1976-04 Annual Average CDD	807
Commercial (MWh per CDD)	216.6
Residential (MWh per CDD)	27.9

³ Includes Schedule F

EXHIBIT 12

Hawaiian Electric Company, Inc.

**RESIDENTIAL RECORDED SALES
MARCH YTD 2005 VS. 2004**

	Mar YTD 2005	Mar YTD 2004	Difference	
			Amt	%
Recorded MWH Sales	503,410.9	509,858.3	-6,447	-1.3%
Bills	765,858	759,219	6,639	0.9%
KWH Use per Bill	657	672	-14.240	-2.1%

Change in Customers x Use per Bill = Difference in Sales					
6,639	x	657	=	4,363,923	KWH

Change in Use Per Bill x Customers = Difference in Sales					
-14.240	x	759,219	=	-10,811,344	KWH

Total:	-6,447,421	KWH
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EXHIBIT 13

Hawaiian Electric Company, Inc.

**BILLED GWHS BY BUILDING TYPE
YTD MARCH**

<i>Building Type</i>	<i>2005</i>	<i>2004</i>	<i>Diff</i>	<i>% Chg</i>
Offices	188.7	190.7	-2.0	-1.0%
Restaurant	58.8	59.0	-0.2	-0.3%
Retail (Non Food)	113.4	114.7	-1.3	-1.1%
Grocery (Retail - Food)	50.1	49.5	0.6	1.2%
Warehouse	31.6	30.8	0.8	2.6%
Education	87.9	91.8	-3.9	-4.2%
Health	54.0	52.6	1.4	2.7%
Lodging (Hotels)	97.5	100.8	-3.3	-3.3%
Housing (Apt/Condo)	104.1	107.8	-3.7	-3.4%
Service/Amusement	85.7	88.6	-2.9	-3.3%
Air Facilities	28.3	29.4	-1.1	-3.7%
Manufacturing	34.3	24.2	10.1	41.7%
Pumping (incl BWS)	45.4	46.8	-1.4	-3.0%
Military/Base	287.8	290.2	-2.4	-0.8%
Food Processing	15.8	17.1	-1.3	-7.6%
Others	19.2	19.3	-0.1	-0.5%
Grand Total	1,302.6	1,313.3	-10.7	-0.8%

EXHIBIT 14

Schedule R Sales Forecast
ed by Acquired DSM through 2004. Not Reduced by Future DSM)
May 2005 Weather Normalized Forecast

Use per customer	Incr	% incr	Wx Norm		Kukui Gardens		Including Kukui Gardens			
			Recorded	Sales	Cust	Sales	Cust	Use	Sales	Incr % Incr
7,793			1,897.7					7,793	1,897.7	
7,800	7	0.09%	1,920.6					7,800	1,920.6	22.8 1.2%
8,043	243	3.12%	2,000.9					8,043	2,000.9	80.3 4.2%
8,196	153	1.90%	2,059.3					8,196	2,059.3	58.3 2.9%
8,441	245	2.99%	2,141.2					8,441	2,141.2	81.9 4.0%
8,551	110	1.30%	2,192.1		505	3.1		8,546	2,195.2	54.0 2.5%
8,645	94	1.10%	2,238.7		857	3.3		8,629	2,242.0	46.8 2.1%
8,671	26	0.30%	2,268.8		857	3.4		8,655	2,272.2	30.2 1.3%
8,731	61	0.70%	2,309.2		857	3.5		8,716	2,312.7	40.5 1.8%
8,784	52	0.60%	2,347.6		857	3.7		8,769	2,351.3	38.6 1.7%
8,784	0	0.00%	2,372.2		857	3.8		8,770	2,376.0	24.7 1.1%

from the residential use per customer econometric model for 2006 - 2010

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EXHIBIT 15

Hawaiian Electric Company, Inc.

**BILLED GWHS BY BUILDING TYPE
WEATHER NORMALIZED WITH ACQUIRED DSM**

Building Type	Weather Norm Billed			May 2005 Forecast		
	2002	2003	2004	2005	2006	2007
Offices	785.4	783.9	791.0	795.4	800.2	804.2
Restaurant	238.0	241.6	244.9	251.2	256.4	261.0
Retail (Non Food)	466.2	471.2	476.1	487.0	505.5	522.1
Grocery (Retail - Food)	204.1	201.4	203.7	209.4	212.5	215.7
Warehouse	124.9	125.3	128.7	135.9	144.2	149.2
Education	362.2	377.6	380.4	388.1	418.6	435.5
Health	211.8	217.5	221.5	230.7	241.3	252.3
Lodging (Hotels)	407.6	412.0	421.0	422.5	424.7	443.2
Housing (Apt/Condo)	430.8	432.6	434.2	437.5	470.7	499.8
Service/Amusement	360.8	367.5	367.6	376.6	380.6	386.0
Air Facilities	120.3	118.6	118.8	120.6	123.3	127.0
Manufacturing	104.2	102.6	118.1	130.6	113.0	120.6
Pumping (incl BWS)	198.8	204.2	190.9	195.3	206.6	220.7
Military/Base	1,155.1	1,157.6	1,200.8	1,254.7	1,343.1	1,413.3
Food Processing	77.5	74.2	69.8	68.0	69.7	71.6
Others	77.0	78.9	78.7	81.1	82.8	84.5
Grand Total	5,324.7	5,366.7	5,446.2	5,584.6	5,793.2	6,006.7

Building Type	2003	2004	2005	2006	2007
Offices	-0.2%	0.9%	0.6%	0.6%	0.5%
Restaurant	1.5%	1.4%	2.6%	2.1%	1.8%
Retail (Non Food)	1.1%	1.0%	2.3%	3.8%	3.3%
Grocery (Retail - Food)	-1.3%	1.1%	2.8%	1.5%	1.5%
Warehouse	0.3%	2.7%	5.6%	6.1%	3.5%
Education	4.3%	0.7%	2.0%	7.9%	4.0%
Health	2.7%	1.8%	4.2%	4.6%	4.6%
Lodging (Hotels)	1.1%	2.2%	0.4%	0.5%	4.4%
Housing (Apt/Condo)	0.4%	0.4%	0.8%	7.6%	6.2%
Service/Amusement	1.9%	0.0%	2.4%	1.1%	1.4%
Air Facilities	-1.4%	0.2%	1.5%	2.2%	3.0%
Manufacturing	-1.5%	15.1%	10.6%	-13.5%	6.7%
Pumping (incl BWS)	2.7%	-6.5%	2.3%	5.8%	6.8%
Military/Base	0.2%	3.7%	4.5%	7.0%	5.2%
Food Processing	-4.3%	-5.9%	-2.6%	2.5%	2.7%
Others	2.5%	-0.3%	3.0%	2.1%	2.1%
Grand Total	0.8%	1.5%	2.5%	3.7%	3.7%

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Hawaiian Electric Company, Inc.
Large Project GWh Sales, May 2005 Forecast

<u>Sector</u>	<u>In Svc Date</u>	<u>Billed 2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Ofc	Aug-08					1.0	1.5	1.5
Restmnt	Sep-02	1.5	1.7	1.7	1.7	1.7	1.7	1.7
Restmnt	Oct-04	0.1	0.7	0.7	0.7	0.7	0.7	0.7
Restmnt	Nov-04		0.7	0.6	0.6	0.6	0.6	0.6
Restmnt	Dec-04		0.7	1.0	1.0	1.0	1.0	1.0
Restmnt	Apr-05		0.2	0.3	0.3	0.3	0.3	0.3
Restmnt	May-05		0.5	0.7	0.7	0.7	0.7	0.7
Restmnt	Oct-05		0.2	0.5	0.5	0.5	0.5	0.5
Retail	Nov-02	4.5	4.7	5.1	5.1	5.1	5.1	5.1
Retail	Mar-04	2.6	3.0	3.1	3.1	3.1	3.1	3.1
Retail	Oct-04	1.0	3.9	3.9	3.9	3.9	3.9	3.9
Retail	Nov-04	0.8	2.8	2.8	2.8	2.8	2.8	2.8
Retail	Jul-05		0.7	2.7	2.7	2.7	2.7	2.7
Retail	Jul-05	4.1	3.2	0.0	0.0	4.1	5.4	5.4
Retail	Aug-05		0.7	1.8	1.8	1.8	1.8	1.8
Retail	Oct-05		0.4	1.8	1.8	1.8	1.8	1.8
Retail	Oct-05		0.4	1.8	1.8	1.8	1.8	1.8
Retail	Dec-05				0.3	1.3	1.3	1.3
Retail	Mar-06			2.9	3.5	3.5	3.5	3.5
Retail	Jul-06			0.9	1.9	1.9	1.9	1.9
Retail	Jul-07				4.2	8.3	8.3	8.3
Retail	Jul-08					3.2	6.3	6.3
Retail		16.2	17.0	18.7	18.7	18.7	18.7	18.7
Grocery	Oct-04	2.4	6.1	6.1	6.1	6.1	6.1	6.1
Grocery	Jan-08					2.1	2.1	2.1
Warehse	Aug-01	0.3	0.4	0.7	0.9	1.0	1.0	1.0
Warehse	Aug-04	0.3	0.6	0.6	0.6	0.6	0.6	0.6
Warehse	Aug-04	0.4	2.2	2.2	2.2	2.2	2.2	2.2
Warehse	Dec-04		1.9	2.0	2.0	2.0	2.0	2.0
Warehse	Feb-05	1.7	0.6	1.2	1.2	1.5	1.5	1.5
Warehse	Oct-05	3.8	3.7	4.3	4.4	4.4	4.4	4.4
Warehse	Jan-06			2.9	2.9	2.9	2.9	2.9
Educ		129.3	116.0	126.8	134.4	134.4	134.4	134.4
Educ	Jul-04	0.3	0.4	0.5	0.5	0.5	0.5	0.5
Educ	Aug-04	0.5	13.3	24.2	24.2	24.2	24.2	24.2
Educ	Aug-04	0.4	0.8	0.8	0.8	0.8	0.8	0.8
Educ	Sep-04		0.5	0.7	1.0	1.0	1.0	1.0
Educ	Aug-06			0.4	0.8	0.8	0.8	0.8
Educ	Jan-08					1.0	1.0	1.0
Educ	Sep-08					1.0	3.1	3.1
Educ	Sep-08					3.5	10.5	10.5
Health	Jul-04		0.4	0.4	0.4	0.4	0.4	0.4
Health	Mar-07						2.3	4.5
Health	Feb-05	1.3	3.6	3.6	3.6	3.6	3.6	3.6
Hotel	Apr-05		(6.2)	(6.2)	(0.7)	2.8	9.8	10.6
Hotel	Jul-07				2.9	5.8	8.7	11.6
Hotel	Jul-07				7.8	15.5	15.5	15.5

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Hawaiian Electric Company, Inc.
Large Project GWh Sales, May 2005 Forecast

<u>Sector</u>	<u>In Svc Date</u>	<u>Billed</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Hotel	Jul-08						3.9	7.8	7.8
Hotel	Jul-08						2.0	4.0	4.0
Hotel	Jan-09							4.1	4.1
Hotel	Jul-09							7.8	15.5
Housing	Apr-04		(3.1)	(3.3)	(3.4)	(3.5)	(3.8)	(3.8)	
Housing	Jun-06		0.1	0.3	0.4	0.5	0.5	0.5	
Housing	Dec-05		0.3	2.0	2.5	2.5	2.5	2.5	
Housing	Jan-05		0.7	1.0	1.4	1.4	1.4	1.4	
Housing	Oct-05		3.4	4.8	9.7	9.7	9.7	9.7	
Housing	Dec-05		0.6	5.3	5.3	5.3	5.3	5.3	
Housing	Jan-06			0.3	0.4	0.4	0.4	0.4	
Housing	Dec-06			2.3	2.9	6.2	8.8	8.8	
Housing	Jun-06			4.0	8.7	8.7	8.7	8.7	
Housing	Jun-06			0.5	0.7	0.7	0.7	0.7	
Housing	Dec-06				1.0	1.2	1.2	1.2	
Housing	Jan-07			1.0	3.0	9.7	9.7	9.7	
Housing	Jun-06			5.0	8.0	13.2	13.2	13.2	
Svc/Amu	Jul-06			1.9	3.7	3.7	3.7	3.7	
Svc/Amu	Nov-05		0.2	1.4	1.4	1.4	1.4	1.4	
Svc/Amu	Jul-07				1.5	3.0	3.0	3.0	
Air Fac	Sep-06			0.2	1.0	1.2	1.2	1.2	
Manufg		10.2	11.7	12.1	12.4	12.4	12.4	12.4	
Manufg	Jul-04	5.7	7.3	7.3	7.3	7.3	7.3	7.3	
Manufg	Sep-04	6.6	3.7	3.7	3.7	3.7	3.7	3.7	
Manufg	Mar-04	4.8	8.5	8.5	8.5	8.5	8.5	8.5	
Manufg	Jan-06			(14.5)	(14.5)	(14.5)	(14.5)	(14.5)	
Pump	Oct-04		1.5	8.8	15.0	19.3	19.9	19.9	
Military				0.2	0.6	1.0	1.4	15.8	
Military						0.8	0.8	0.8	
Military					11.5	19.1	25.0	38.0	
Military				2.1	4.2	4.2	4.2	5.2	
Military			3.7	47.5	67.1	70.0	83.6	83.6	
Military		1.7	7.5	15.4	17.5	17.5	17.5	17.5	
Military		33.6	33.1	36.5	37.7	40.5	62.1	108.7	
Military			8.5	17.7	20.6	25.1	27.3	27.5	
Military							1.8	1.8	
Military								15.3	
Military			0.1	0.6	0.8	0.8	1.1	1.4	
Military			12.4	12.2	18.9	23.6	14.7	21.4	
Fd Proc	Oct-04	4.7	1.2	1.2	1.2	1.2	1.2	1.2	
Total			238.8	287.2	408.2	513.8	600.3	684.1	795.2
Incremental YOY Change				48.4	121.0	105.6	86.5	83.8	111.1

EXHIBIT 17

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HECO CHP Forecast - With Utility Participation
Annual Ramped Impacts

Year	Utility				3rd Party				Total			
	Sys	CHP kW	A/C kW	Total kW	Impact on Cus ¹ kW	Impact on Cus ¹ MWh	CHP MWh Gen ²	Sys	kW	Impact on Cus ³ kW	Impact on Cus ³ MWh	Impact on Cus ⁴ kW
2005	0	0	0	0	0	0	0	1	300	-273	-1,206	-273
2006	6	3,850	550	4,400	-601	-1,101	7,715	1	500	-728	-4,729	-1,208
2007	5	3,500	500	4,000	-858	-5,485	38,450	7	4,900	-1,229	-5,830	-5,830
2008	6	4,200	600	4,800	-1,502	-9,218	64,527	6	4,500	-2,139	-14,210	-14,210
2009	6	4,200	600	4,800	-2,048	-13,165	82,158	7	5,300	-3,140	-21,918	-21,918
2010	4	2,800	400	3,200	-2,412	-16,349	114,428	5	3,700	-4,960	-37,022	-37,022

Peak kW w/ T&D loss of 4.864%				Utility CHP Gen MWh w/ T&D loss	
Utility ⁵	3rd party ⁵	Total ⁵			
0	-287	-287		0	
-627	-785	-1,292		8,109	
-1,005	-1,243	-2,248		40,416	
-1,578	-1,722	-3,301		67,826	
-2,153	-2,200	-4,353		96,870	
-2,535	-2,678	-5,214		120,278	

Note: Assumes utility CHP System load factor of 75.1% and 3rd party availability of 91.0%.

¹ Sales Level. Cumulative Avoided A/C kW. Cus¹ kW assumes 91% availability. Sales assumes 75.1% load factor, calculated using 8,780 hours.

² Sales Level. Cumulative CHP kW x 75.1% x hours.

³ Sales Level. Cumulative 3rd party CHP kW. Sales calculated using 8,780 hours.

⁴ Sales Level. Cumulative Avoided A/C or 3rd party CHP kW.

⁵ Net-to-system level. Cumulative Avoided A/C or 3rd party CHP kW.

Source: Energy Projects, 3/9/05

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EXHIBIT 18

Hawaiian Electric Company, Inc.
MAY 2005 SALES FORECAST

	Recd 2004	2005	2006	2007	2008	2009	2010
Sales Forecast with Adjustments, No Future DSM							
Residential	2,151.3	2,193.9	2,239.3	2,268.2	2,313.7	2,344.6	2,368.0
% incr		2.0%	2.1%	1.3%	2.0%	1.3%	1.0%
Commercial	5,543.9	5,583.4	5,787.4	5,992.5	6,108.5	6,204.2	6,363.0
% incr		0.7%	3.7%	3.5%	1.9%	1.6%	2.6%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,814.9	8,064.3	8,298.3	8,459.9	8,586.4	8,768.6
% incr		1.1%	3.2%	2.9%	1.9%	1.5%	2.1%
Future DSM							
Residential		-4.7	-20.9	-39.6	-58.4	-77.1	-95.8
% incr							
Commercial		-10.7	-40.6	-70.5	-100.4	-130.3	-160.2
% incr							
Sched F		0.0	0.0	0.0	0.0	0.0	0.0
% incr							
Total		-15.4	-61.5	-110.1	-158.8	-207.4	-256.0
% incr							
Recommended Sales Forecast with Future DSM							
Residential	2,151.3	2,189.2	2,218.4	2,228.6	2,255.3	2,267.5	2,272.2
% incr		1.8%	1.3%	0.5%	1.2%	0.5%	0.2%
Commercial	5,543.9	5,572.7	5,746.8	5,922.0	6,008.1	6,073.9	6,202.8
% incr		0.5%	3.1%	3.0%	1.5%	1.1%	2.1%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,799.5	8,002.8	8,188.2	8,301.1	8,379.0	8,512.6
% incr		0.9%	2.6%	2.3%	1.4%	0.9%	1.6%

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EXHIBIT 19

Hawaiian Electric Company, Inc.
MILITARY GWH SALES
Comparison of June 2004 Update vs. October 2003 HEI Forecast

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
May 2005 Sales Forecast						
C-17 Squadron ¹	4.7	48.7	53.8	56.1	57.0	57.0
Carrier Homeport ²	0.0	0.0	0.0	0.0	23.6	82.6
Pearl Harbor ship loads ³	30.0	30.0	30.0	30.0	30.0	30.0
Stryker Brigade ¹	8.2	17.1	19.9	22.0	22.9	22.9
Ford Island	0.0	0.0	11.5	19.1	25.0	38.0
DOD Hsg Privatization	12.4	12.2	18.9	23.6	14.7	21.4
Total	55.3	108.0	134.1	150.8	173.2	251.9
June 2004 Sales Update						
C-17 Squadron ¹	4.7	48.7	53.8	56.1	57.0	
Carrier Homeport ²	0.0	0.0	0.0	0.0	23.6	
Pearl Harbor ship loads	20.0	20.0	20.0	20.0	20.0	
Stryker Brigade ¹	8.2	19.8	22.2	23.0	23.6	
Ford Island	0.0	15.8	24.1	25.1	30.7	
DOD Hsg Privatization	-1.0	1.7	4.5	1.6	13.7	
Total	31.9	106.0	124.6	125.8	168.6	
May 2005 less June 2004						
C-17 Squadron	0.0	0.0	0.0	0.0	0.0	
Carrier Homeport	0.0	0.0	0.0	0.0	0.0	
Pearl Harbor ship loads	10.0	10.0	10.0	10.0	10.0	
Stryker Brigade	0.0	-2.7	-2.3	-1.0	-0.7	
Ford Island	0.0	-15.8	-12.6	-6.0	-5.7	
DOD Hsg Privatization	13.4	10.5	14.4	22.0	1.0	
Total Increase	23.4	2.0	9.5	25.0	4.6	

¹ Load substantially from projects funded in proposed FY04 Department of Defense Military Construction and Family Housing Appropriation Budget.

² Load estimate includes an accompanying Air Wing.

³ Surface ships visiting Pearl Harbor as part of forward deployment strategies.

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EXHIBIT 20

Hawaiian Electric Company, Inc.
Comparison of May 2005 Sales Forecast vs. June 2004 Sales Update (Report 1)

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
May 2005 Sales Forecast (Reduced by Future DSM)							
Residential	2,151.3	2,189.2	2,218.4	2,228.6	2,255.3	2,267.5	2,272.2
% incr		1.8%	1.3%	0.5%	1.2%	0.5%	0.2%
Commercial	5,543.9	5,572.7	5,746.8	5,922.0	6,008.1	6,073.9	6,202.8
% incr		0.5%	3.1%	3.0%	1.5%	1.1%	2.1%
Sched F	37.6	37.6	37.6	37.6	37.7	37.6	37.6
% incr		0.0%	0.0%	0.0%	0.3%	-0.3%	0.0%
Total	7,732.8	7,799.5	8,002.8	8,188.2	8,301.1	8,379.0	8,512.6
% incr		0.9%	2.6%	2.3%	1.4%	0.9%	1.6%

June 2004 Sales Update (Reduced by Future DSM)

	5,488.0	5,457.7	5,688.0	5,788.7	5,888.0	5,988.0
% incr		1.8%	0.5%	0.5%	0.6%	0.4%
Commercial	5,513.3	5,656.8	5,825.7	5,947.6	5,992.8	6,040.4
% incr		2.6%	3.0%	2.1%	0.8%	0.8%
Sched F	39.8	40.3	40.9	41.5	42.2	42.7
% incr		1.3%	1.5%	1.5%	1.7%	1.2%
Total	7,661.1	7,842.8	8,023.4	8,156.8	8,215.3	8,272.6
% incr		2.4%	2.3%	1.7%	0.7%	0.7%

May 2005 less June 2004

Residential	43.3	43.5	61.6	60.9	75.0	78.0
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EXHIBIT 21

Hawaiian Electric Company, Inc.

2005 Operational Sales Forecast *

	<u>GWh</u>
2005 Weather Normalized Sales Forecast	7,799.5
Less: Jan-Mar weather norm forecast	1,795.9
Add: Jan-Mar actual recorded	<u>1,789.2</u>
2005 Operational Sales Forecast	7,792.8
2004 Actual Recorded Sales	7,732.8
Operational Sales Increase Over Actual 2004	0.8%

* Operational Forecast replaces weather normalized forecast with actual recorded.

EXHIBIT 22

**Hawaiian Electric Company, Inc.
Comparison of May 2005 Peak Forecast vs.
Report 1 (June 2004 Update) Peak Forecast
(Gross MW)**

	<u>2004 *</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
May 2005 Peak Forecast							
System Peak	1,353	1,349	1,390	1,414	1,422	1,443	1,462
% incr		-0.3%	3.1%	1.7%	0.6%	1.5%	1.3%
Report 1 (June 2004 Update) Peak Forecast							
System Peak	1,326	1,360	1,389	1,406	1,409	1,429	
% incr		2.6%	2.1%	1.2%	0.2%	1.4%	
May 2005 less Report 1 Difference							
Gross MW		-11	1	8	13	15	

* 2004 actual = 1,327 MW, plus 26 MW standby adjustment.

Note: May 2005 forecast peaks include 26 MW and 28 MW standby adjustments in 2005 and 2006-on, respectively. Report 1 forecast peaks include 21 MW standby.

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STANDBY ON HECO EVENING PEAK

Maximum Priority Peak Load

Date: 12/16/04

Time: 21:00

20,232 KW

¹

3,547 KW

Total 23,779 KW

²

2,000 KW

Total 25,779 KW

May 2005 Forecast

2005 Standby 26.0 MW

2006-on Stdby 28.0 MW

¹ Demand in excess of base load of 2.0 MW. Beginning in 2006, this 2.0 MW will also be assumed to be included in standby.

² Assumes one of five 2.0 Mw units is unavailable.

Source: Remote interrogation readings, 7/99 - 12/31/04.

Note: Coincidence of cogenerator outages based on occurrences of Tesoro outages. Total kW delivered by HECO for Tesoro and Chevron during September - December for the years 1999 - 2004, and maximum coincidence during evening peak (17:00 - 21:00)

EXHIBIT 23
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STANDBY ON HECO DAY PEAK

Maximum Priority Peak Load

Date: 9/23/04

Time: 12:30

19,814 KW

¹ 3,413 KW

Total 23,227 KW

² 2,000 KW

Total 25,227 KW

May 2005 Forecast

2005 Standby 25.0 MW

2006-on Stdbby ¹ 27.0 MW

¹ Demand in excess of base load of 2.0 MW. Beginning in 2006, this 2.0 MW will also be assumed to be included in standby.

² Assumes one of five 2.0 Mw units is unavailable.

Source: Remote interrogation readings, 7/99 - 12/31/04.

Note: Coincidence of cogenerator outages based on occurrences of Tesoro outages. Total kW delivered by HECO for Tesoro and Chevron during July - September for the years 1999 - 2004, and maximum coincidence during day peak (10:00 - 14:00)

EXHIBIT 24

Hawaiian Electric Company, Inc.

RIDER I - INTERRUPTIBLE LOADS (MW)

<u>Name</u>	<u>Ave Meas Demand ¹</u>		<u>mW Interruptible</u>	
	<u>AM</u>	<u>PM</u>	<u>AM</u>	<u>PM</u>
	1.7	1.9	1.5	1.7
	1.1	0.1	1.1	0.1
	0.9	0.0	0.9	0.0
	1.1	1.2	0.6	0.7
	1.1	1.8	1.1	1.8
	5.9	5.0	5.2	4.3

Note:

1. AM peak - Average Aug-Sept weekday load during the time of the daily am peak, 11 am to 2 pm.

PM peak - Average Sept-Dec weekday load during the time

of the daily pm peak, 6 to 9 pm.

EXHIBIT 25
PAGE 1 OF 5
REVISED 6-3-05

Hawaiian Electric Company, Inc.

2005 - 2010 EVENING PEAK, DAY PEAK, MINIMUM LOAD DEMAND,
SALES LOAD FACTOR, AND SALES FORECAST

May 20, 2005

Day Peak	GROSS MW										GWH SALES									
	Day Peak					Minimum Load Demand					Day Peak					Minimum Load Demand				
	Gross Peak Demand w/DSM % Chg	Sales Load Factor w/DSM	Gross Peak Demand w/o DSM	Acquired DSM Program Impact	Future DSM Program Impact	Gross Peak Demand w/DSM % Chg	Gross Demand w/o DSM	Acquired DSM Program Impact	Future DSM Program Impact	Gross Demand w/DSM % Chg	Gross Peak Demand w/o DSM	Acquired DSM Program Impact	Future DSM Program Impact	Recorded Sales w/o DSM	Acquired DSM Program Impact	Future DSM Program Impact	Recorded Sales w/DSM	Acquired DSM Program Impact	Future DSM Program Impact	% Chg
1	2.7%	66.0%	1093			3.6%	468			1.7%	6470.6			6470.6			6470.6			3.5%
	2.0%	65.4%	1101			0.7%	470			0.4%	6539.0			6539.0			6539.0			1.1%
	2.8%	64.5%	1143			3.8%	477			1.5%	6650.4			6650.4			6650.4			1.7%
	0.1%	64.2%	1145			0.2%	473			-0.6%	6607.4			6607.4			6607.4			-0.6%
	1.6%	65.0%	1164			1.7%	482			1.9%	6787.4			6787.4			6787.4			2.9%
	-0.3%	66.8%	1158			-0.7%	487			1.0%	6962.8			6962.8			6962.8			2.4%
	1199	0.8%	67.3%	-1	1209	4.6%	495			1.6%	7094.7			7094.7			7094.7			1.8%
	1220	1.6%	65.9%	-7	1213	0.3%	503			1.6%	7040.3			7040.3			7040.3			-0.7%
	1175	-3.7%	67.4%	-11	1162	-4.2%	507			0.6%	6989.3			6989.3			6989.3			-1.4%
	1161	-1.2%	68.8%	-15	1154	-0.7%	523			3.2%	7088.2			7088.2			7088.2			0.9%
	1203	3.6%	68.2%	-19	1191	3.2%	517			-1.1%	7301.7			7301.7			7301.7			3.1%
	1233	2.5%	67.4%	-23	1210	1.6%	542			4.8%	7389.5			7389.5			7389.5			0.9%
	1250	1.4%	67.5%	-27	1227	1.4%	523			-3.5%	7527.5			7527.5			7527.5			1.6%
	1264	2.7%	66.9%	-31	1256	2.4%	534			2.1%	7677.2			7677.2			7677.2			1.6%
	1327	3.3%	66.3%	-34	1281	2.0%	560			4.9%	7904.6			7904.6			7904.6			2.8%
<p>are not reduced for interruptible loads (4 MW), but do include standby loads (28 MW in 2005 and 28 MW in 2006-on).</p> <p>are not reduced for interruptible loads (5 MW), but do include standby loads (25 MW in 2005 and 27 MW in 2006-on).</p> <p>minimums include impact of HECO and 3rd party CHP.</p>																				
-6	1349	1.7%	66.0%	-36	1371	3.9%	553			-1.3%	7985.7			7985.7			7985.7			0.9%
15	1390	3.0%	65.7%	-35	1423	3.2%	576			4.2%	8242.4			8242.4			8242.4			2.6%
26	1414	1.7%	66.1%	-33	1459	2.0%	581			2.5%	8467.7			8467.7			8467.7			2.3%
35	1422	0.6%	66.5%	-32	1469	0.1%	602			1.8%	8627.1			8627.1			8627.1			1.4%
46	1443	1.5%	66.3%	-32	1501	1.6%	608			1.1%	8751.1			8751.1			8751.1			0.9%
56	1462	1.3%	66.5%	-30	1528	1.3%	632			3.9%	8926.1			8926.1			8926.1			1.6%

except for 1996 when day peak was the system peak.

EXHIBIT 25
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Hawaiian Electric Company, Inc.

2005 - 2010 EVENING PEAK, DAY PEAK, MINIMUM LOAD DEMAND,
SALES LOAD FACTOR, AND SALES FORECAST

May 20, 2005

	GROSS MW										GWH SALES						
	Evening Peak					Day Peak					Minimum Load Demand						
	Gross Peak w/o DSM w/o CHP	HECO CHP Impact	3rd Party CHP	Gross Peak w/o DSM w/o CHP	% Chg	Gross Peak w/o DSM w/o CHP	HECO CHP Impact	3rd Party CHP	Gross Peak w/o DSM w/o CHP	% Chg	Gross Demand w/o DSM w/o CHP	HECO CHP Impact	3rd Party CHP	Recorded Sales w/o DSM w/o CHP	% Chg	Recorded Sales w/o DSM w/o CHP	% Chg
Actual																	
1990	1119			1119	2.7%	1093			1093	3.6%	468			6470.6	3.5%	6470.6	3.5%
1991	1141			1141	2.0%	1101			1101	0.7%	470			6539.0	1.1%	6539.0	1.1%
1992	1173			1173	2.8%	1143			1143	3.8%	477			6650.4	1.7%	6650.4	1.7%
1993	1174			1174	0.1%	1145			1145	0.2%	473			6607.4	-0.8%	6607.4	-0.8%
1994	1193			1193	1.6%	1164			1164	1.7%	482			6797.4	2.8%	6797.4	2.8%
1995	1190			1190	-0.3%	1156			1156	-0.7%	487			6962.8	2.4%	6962.8	2.4%
1996 *	1202			1202	1.0%	1210			1210	0.7%	496			7094.7	1.9%	7094.7	1.9%
1997	1227			1227	2.1%	1220			1220	0.6%	503			7068.7	-0.4%	7068.7	-0.4%
1998	1187			1187	-3.3%	1173			1173	-3.9%	507			6989.3	-1.1%	6989.3	-1.1%
1999	1177			1177	-0.8%	1169			1169	-0.3%	523			7068.2	1.1%	7068.2	1.1%
2000	1223			1223	3.9%	1210			1210	3.5%	517			7301.7	3.3%	7301.7	3.3%
2001	1257			1257	2.8%	1233			1233	1.9%	542			7389.5	1.2%	7389.5	1.2%
2002	1278			1278	1.7%	1254			1254	1.7%	523			7527.5	1.9%	7527.5	1.9%
2003	1316			1316	3.0%	1287			1287	2.6%	534			7677.2	2.0%	7677.2	2.0%
2004	1362			1362	3.5%	1315			1315	2.2%	560			7804.6	3.0%	7804.6	3.0%
Forecast																	
2005	1391	0	0	1391	2.1%	1371	0	0	1371	4.3%	553	0	0	7996.9	-1.3%	7996.9	-1.3%
2006	1440	0	-1	1439	3.5%	1424	0	-1	1423	3.8%	576	0	0	8248.2	4.2%	8248.2	4.2%
2007	1474	-1	-1	1472	2.3%	1481	-1	-1	1459	2.5%	593	-1	-1	8481.9	2.5%	8481.9	2.5%
2008	1493	-2	-2	1489	1.2%	1473	-2	-2	1469	0.7%	604	-1	-1	8649.0	1.9%	8649.0	1.9%
2009	1525	-2	-2	1521	2.1%	1505	-2	-2	1501	2.2%	612	-2	-2	8781.0	1.1%	8781.0	1.1%
2010	1554	-3	-3	1548	1.8%	1533	-2	-3	1528	1.8%	636	-2	-2	8963.1	3.9%	8963.1	3.9%

Forecast evening peaks are not reduced for interruptible loads (4 MW), but do include standby loads (26 MW in 2005 and 28 MW in 2006-on).
Forecast day peaks are not reduced for interruptible loads (5 MW), but do include standby loads (25 MW in 2005 and 27 MW in 2006-on).
Forecast assumes CHP with utility participation.

* Evening peaks are system peaks except for 1996 when day peak was the system peak.

EXHIBIT 25
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GWH SALES				
Recorded Sales	Acquired DSM Program Impact	Future DSM Program Impact	Recorded Sales w/ DSM	% Change
70.6				3.5%
39.0				1.1%
50.4				1.7%
07.4				-0.6%
97.4				2.9%
62.8				2.4%
94.7	-3.6		7091.1	1.8%
68.7	-28.4		7040.3	-0.7%
89.3	-51.0		6836.3	-1.4%
68.2	-70.3		6997.9	0.9%
01.7	-89.9		7211.8	3.1%
89.5	-112.8		7276.7	0.9%
27.5	-137.1		7390.4	1.6%
77.2	-155.0		7522.2	1.8%
104.6	-171.8		7732.8	2.8%
MW in 2006-on).				
/ in 2006-on).				
985.7	-180.8	-15.4	7799.5	0.9%
242.4	-178.1	-61.5	8002.8	2.6%
167.7	-169.4	-110.1	8188.2	2.3%
327.1	-167.2	-158.8	8301.1	1.4%
751.1	-164.7	-207.4	8379.0	0.9%
326.1	-157.5	-256.0	8512.6	1.6%

Hawaiian Electric Company, Inc.
2005 - 2010 EVENING PEAK, DAY PEAK, MINIMUM LOAD DEMAND,
SALES LOAD FACTOR, AND SALES FORECAST

May 20, 2005

	NET MW						GWH SALES					
	Evening Peak			Day Peak			Recorded Sales			Recorded Sales		
	Net Peak w/o CHP	HECO CHP Impact	3rd Party CHP Impact	Net Peak w/o CHP	HECO CHP Impact	3rd Party CHP Impact	Net Peak w/o CHP	HECO CHP Impact	3rd Party CHP Impact	Net Peak w/o CHP	HECO CHP Impact	3rd Party CHP Impact
Actual												
1990	1088			1058			6470.6			6470.6		
1991	1129			1101			6539.0			6539.0		
1992	1123			1099			6650.4			6650.4		
1993	1140			1112			6607.4			6607.4		
1994	1158			1125			6787.4			6787.4		
1995	1159			1167			6962.8			6962.8		
1996	1183			1177			7084.7			7084.7		
1997	1142			1131			7068.7			7068.7		
1998	1135			1126			6989.3			6989.3		
1999	1183			1168			7068.2			7068.2		
2000	1214			1192			7301.7			7301.7		
2001	1231			1216			7389.5			7389.5		
2002	1272			1243			7527.5			7527.5		
2003	1314			1279			7677.2			7677.2		
2004							7904.6			7904.6		
Forecast												
2005	1343	0	0	1326	0	0	7996.9	0.0	-1.2	7995.7	0.0	-1.2
2006	1392	0	-1	1377	0	-1	8248.2	-1.1	-4.7	8242.4	-1.1	-4.7
2007	1424	-1	-1	1413	-1	-1	8481.9	-5.5	-8.7	8467.7	-5.5	-8.7
2008	1443	-2	-2	1425	-2	-2	8649.0	-9.2	-12.7	8627.1	-9.2	-12.7
2009	1475	-2	-2	1457	-2	-2	8791.0	-13.2	-16.7	8751.1	-13.2	-16.7
2010	1502	-3	-3	1483	-2	-3	8963.1	-16.3	-20.7	8926.1	-16.3	-20.7

EXHIBIT 25
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Forecast evening peaks are not reduced for interruptible loads (4 MW), but do include standby loads (26 MW in 2005 and 28 MW in 2006-on).
Forecast day peaks are not reduced for interruptible loads (5 MW), but do include standby loads (25 MW in 2005 and 27 MW in 2006-on).
Forecast assumes CHP with utility participation.

* Evening peaks are system peaks except for 1995 when day peak was the system peak.

EXHIBIT 25
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Hawaiian Electric Company, Inc.

2005 - 2010 FORECAST OF OTHER ENERGY SOURCES (MWH)

Year	HPOWER	Kalaeloa	AES	Non-Firm Producers	Total
2005	339,922	1,506,099	1,531,096	6,990	3,384,107
2006	344,558	1,500,303	1,561,033	6,990	3,412,884
2007	341,909	1,512,444	1,531,096	6,990	3,392,439
2008	343,454	1,516,716	1,565,310	6,990	3,432,470
2009	341,026	1,516,983	1,437,006	6,990	3,302,005
2010	341,026	1,476,983	1,531,096	6,990	3,356,095

Notes:

1) **HPOWER, Kalaeloa, AES**

Source: Power Supply Services Department, Power Purchase Division emails 2/1/05, based on Generation Planning Division email 8/16/04.

2) **Non-Firm Producers**

Source: Power Supply Services Department, Power Purchase Division email 2/1/05

	<u>Chevron *</u>	<u>Tesoro</u>
2004	735	6,255
2005	735	6,255

2006	735	6,255
2007	735	6,255
2008	735	6,255
2009	735	6,255

* Assumes no impact on deliveries due to any additional co-gen units

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE R - RESIDENTIAL SERVICE

DETERMINATION OF TEST-YEAR BILLING LOADS
BY CUSTOMER GROUP

<u>RECORDED:</u>	<u>NO. OF BILLS</u>		<u>MWH SALES</u>	
	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>	<u>PERCENT OF TOTAL</u>
RESIDENTIAL-R 1 Phase	3,032,441	99.18	2,026,195	98.84
RESIDENTIAL-R 3 Phase	1,541	0.05	3,861	0.19
EMPLOYEES-E 1 Phase	23,555	0.77	19,953	0.97
EMPLOYEES-E 3 Phase	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>
TOTAL R AND E	3,057,537	100.00	2,050,008	100.00
APT. HOUSE DISCOUNT	15,425	0.50	6,078	0.30

<u>FORECASTS:</u>	<u>NO. OF BILLS</u>		<u>MWH SALES</u>	
	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>
RESIDENTIAL-R 1 Phase	99.18	3,066,423	98.84	2,129,409
RESIDENTIAL-R 3 Phase	0.05	1,546	0.19	4,093
EMPLOYEES-E 1 Phase	0.77	23,807	0.97	20,898
EMPLOYEES-E 3 Phase	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>
TOTAL R AND E	100.00	3,091,776	100.00	2,154,400
APT. HOUSE DISCOUNT	0.50	15,459	0.30	6,463

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

DETERMINATION OF TEST-YEAR REVENUE ADJUSTMENTS
FOR MINIMUM CHARGE PROVISION

<u>1 PHASE</u>	<u>PRESENT RATES</u>	<u>PROPOSED RATES</u>
MINIMUM CHRG.,\$/MO.	16.00	20.00
BASE RATE,\$/kWh	0.112954	0.173318
F.O.A.,\$/kWh	0.054140	0.000000
CUSTOMER CHRG, \$/MO	7.00	10.00
MINIMUM kWh/MONTH	53.86	57.70

<u>3 PHASE</u>		
MINIMUM CHRG.,\$/MO.	16.00	25.00
BASE RATE,\$/kWh	0.112954	0.173318
F.O.A.,\$/kWh	0.054140	0.000000
CUSTOMER CHRG, \$/MO	15.00	20.00
MINIMUM kWh/MONTH	5.98	28.85

<u>1 PHASE</u>	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH</u>				
TOTAL R,E 1 Phase	2,046,148	2,150,307	2,046,148	2,150,307
<= MIN.KWH 53 (57)	716	753	888	925
% OF TOTAL	0.035		0.043	

<u>NUMBER OF BILLS</u>				
TOTAL R,E 1 Phase	3,055,996	3,090,230	3,055,996	3,090,230
<= MIN.KWH 53 (57)	44,791	45,303	47,875	48,424
% OF TOTAL	1.466		1.567	

<u>3 PHASE</u>	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH</u>				
TOTAL R,E 3 Phase	3,861	4,093	3,861	4,093
<= MIN.KWH 5 (28)	0	0	0	0
% OF TOTAL	0.001		0.004	

<u>NUMBER OF BILLS</u>				
TOTAL R,E 3 Phase	1,541	1,546	1,541	1,546
<= MIN.KWH 5 (28)	29	29	35	35
% OF TOTAL	1.882		2.271	

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS
FOR MINIMUM CHARGE PROVISION

AT PRESENT RATES

<u>1 PHASE</u>	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000s</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	
BASE ENERGY CHARGE	753	11.2954	\$85.1
FUEL OIL ADJUSTMENT:	753	5.414	\$40.8
	<u>BILLS</u>	<u>\$/MONTH</u>	
CUSTOMER CHARGE	45,303	7.00	<u>\$317.1</u>
TOTAL, No Min Chrg Provision			\$443.0
	<u>BILLS</u>	<u>\$/MONTH</u>	
AS BILLED WITH MINIMUM CHARGE:	45,303	16.00	<u>\$724.8</u>
1 PHASE - MINIMUM BILL ADJ.			\$281.8

AT PROPOSED RATES

<u>1 PHASE</u>	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000s</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	
BASE ENERGY CHARGE	925	17.3318	\$160.3
FUEL OIL ADJUSTMENT:	925	0.000	\$0.0
	<u>BILLS</u>	<u>\$/MONTH</u>	
CUSTOMER CHARGE	48,424	10.00	<u>\$484.2</u>
TOTAL, No Min Chrg Provision			\$644.5
	<u>BILLS</u>	<u>\$/MONTH</u>	
AS BILLED WITH MINIMUM CHARGE	48,424	20.00	<u>\$968.5</u>
1 PHASE - MINIMUM BILL ADJ.			\$324.0

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS
FOR MINIMUM CHARGE PROVISION

AT PRESENT RATES

<u>3 PHASE</u>	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000s</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	
BASE ENERGY CHARGE	-	11.2954	\$0.0
FUEL OIL ADJUSTMENT:	-	5.414	\$0.0
	<u>BILLS</u>	<u>\$/MONTH</u>	
CUSTOMER CHARGE	29	15.00	<u>\$0.4</u>
TOTAL, No Min Chrg Provision			\$0.4
	<u>BILLS</u>	<u>\$/MONTH</u>	
AS BILLED WITH MINIMUM CHARGE:	29	16.00	<u>\$0.5</u>
3 PHASE - MINIMUM BILL ADJ.			\$0.1

AT PROPOSED RATES

<u>3 PHASE</u>	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000s</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	
BASE ENERGY CHARGE	-	17.3318	\$0.0
FUEL OIL ADJUSTMENT:	-	0.0000	\$0.0
	<u>BILLS</u>	<u>\$/MONTH</u>	
CUSTOMER CHARGE	35	20.00	<u>\$0.7</u>
TOTAL, No Min Chrg Provision			\$0.7
	<u>BILLS</u>	<u>\$/MONTH</u>	
AS BILLED WITH MINIMUM CHARGE	35	25.00	<u>\$0.9</u>
3 PHASE - MINIMUM BILL ADJ.			\$0.2

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS
FOR EMPLOYEE SERVICE

ALL SINGLE PHASE

	RECORDED	FORECAST
<u>MWH SALES:</u>		
0-825 KWH	7,143	7,482
>825 KWH	12,809	13,416
TOTAL	19,953	20,898

NUMBER OF BILLS:

0-825 KWH	13,292	13,434
>825 KWH	10,263	10,373
TOTAL	23,555	23,807

	UNITS BILLED (MWH)	UNIT PRICE \$/KWH	REVENUES \$1000s
<u>EMPLOYEE DISCOUNT</u> 0-825 KWH			
ENERGY CHARGE	7482	11.2954	\$845.1
FUEL OIL ADJUSTMENT:	7482	5.414	\$405.1
SUBTOTAL			\$1,250.2
	<u>BILLS</u>		
CUSTOMER CHARGE	13434	7.00	\$94.0
TOTAL			\$1,344.2
<u>-1/3 EMPLOYEE ADJUSTMENT</u>			(\$448.1)

	UNITS BILLED (MWH)	UNIT PRICE \$/KWH	REVENUES \$1000s
<u>EMPLOYEE DISCOUNT</u> >825 KWH LIMITED to 825 KWH			
ENERGY CHARGE	8558	11.2954	\$966.7
FUEL OIL ADJUSTMENT:	8558	5.414	\$463.3
SUBTOTAL			\$1,430.0
	<u>BILLS</u>		
CUSTOMER CHARGE	10373	7.00	\$72.6
TOTAL			\$1,502.6
<u>-1/3 EMPLOYEE ADJUSTMENT</u>			(\$500.9)
<u>TOTAL EMPLOYEE ADJ:</u>			(\$949.0)

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR APARTMENT HOUSE COLLECTION PROVISION

	<u>PRESENT RATES</u>	<u>PROPOSED RATES</u>
MAX Bill 100% Disc.,\$/MO.	50.00	50.00
BASE ENERGY ,\$/KWH	0.112954	0.173318
F.O.A., \$/KWH	0.05414	0.00000
RATE ADJUSTMENT, %	(0.00400)	0.000000
CUST. CHG., \$/BILL	7.00	10.00
KWH BLOCK @ MAX.DISC.	258.21	230.79

	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED (MWH)</u>	<u>FORECAST (MWH)</u>	<u>RECORDED (MWH)</u>	<u>FORECAST (MWH)</u>
<u>SALES:</u>				
0-258 (230) KWH	931	990	746	793
>258 (230) KWH	<u>5,148</u>	<u>5,473</u>	<u>5,332</u>	<u>5,670</u>
TOTAL	6,078	6,463	6,078	6,463
	<u>RECORDED BILLS</u>	<u>FORECAST BILLS</u>	<u>RECORDED BILLS</u>	<u>FORECAST BILLS</u>
<u>NUMBER OF BILLS:</u>				
0-258 (230) KWH	6,914	6,929	6,159	6,173
>258 (230) KWH	<u>8,511</u>	<u>8,530</u>	<u>9,266</u>	<u>9,286</u>
TOTAL	15,425	15,459	15,425	15,459

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005 REBUTTAL TESTIMONY
SCHEDULE R - RESIDENTIAL SERVICE

ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS
FOR APARTMENT HOUSE COLLECTION PROVISION

PRESENT RATES

	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>
Apt. Bills subject to 100% of Apt. House Discount	<u>MWH</u>	<u>¢/kWh</u>	
ENERGY CHARGE	990	11.2954	\$111.8
	<u>Bills</u>	<u>\$/month</u>	
CUSTOMER CHARGE	6,929	7.00	<u>\$48.5</u>
TOTAL BASE CHARGES			<u>\$160.3</u>
FUEL OIL ADJUSTMENT:	5.414	¢/KWH	\$53.6
RATE ADJUSTMENT (AES REFUI	-0.400	(%)	<u>(\$0.6)</u>
TOTAL ADJUSTMENTS			<u>\$53.0</u>
TOTAL OF BILLS subject to 10% discount			\$213.3
10% APT DISC.			(21.3)
	<u>Bills</u>	<u>\$/month</u>	
Apt. House Bills subject to Maximum Discount	8,530	5.00	<u>(\$42.7)</u>
APT. HOUSE REVENUE ADJ.			<u>(\$64.0)</u>

PROPOSED RATES

	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>
Apt. Bills subject to 100% of Apt. House Discount	<u>MWH</u>	<u>¢/kWh</u>	
ENERGY CHARGE	793	17.3318	\$137.4
	<u>Bills</u>	<u>\$/month</u>	
CUSTOMER CHARGE	6,173	10.00	<u>\$61.7</u>
TOTAL BASE CHARGES			<u>\$199.1</u>
FUEL OIL ADJUSTMENT:	0.000	¢/KWH	\$0.0
RATE ADJUSTMENT (AES REFUI	0.000	(%)	<u>\$0.0</u>
TOTAL ADJUSTMENTS			<u>\$0.0</u>
TOTAL OF BILLS subject to 10% discount			\$199.1
10% APT DISC.			(19.9)
	<u>Bills</u>	<u>\$/month</u>	
Apt. House Bills subject to Maximum Discount	9,286	5.00	<u>(\$46.4)</u>
APT. HOUSE REVENUE ADJ.			<u>(\$66.3)</u>

Hawaiian Electric Company, Inc.
Summary of HECO Proposed R and Proposed TOU-R based on Pilot Program Data.
Derivation of Schedule TOU-R Adjustment at Proposed Rates

Month	N	Total Bill (\$)	
		@Proposed R Rates	@Proposed TOU-R Rates
(A)	(B)	(C)	(D)
Aug-03	28	\$7,730.95	\$7,651.51
Sep-03	90	\$15,938.26	\$15,875.22
Oct-03	175	\$27,799.41	\$27,838.72
Nov-03	176	\$25,970.75	\$25,468.25
Dec-03	176	\$27,072.91	\$26,870.57
Jan-04	178	\$26,710.82	\$26,321.41
Feb-04	162	\$23,173.85	\$22,809.79
Mar-04	160	\$23,261.44	\$23,101.74
Apr-04	163	\$23,878.50	\$23,662.74
May-04	164	\$26,081.21	\$25,448.29
Total		\$227,618.10	\$225,048.24
Annualized Total		\$273,141.72	\$270,057.84
Annualized Total Diff			-\$3,083.88
No. Pilot Cust			164
Avg \$/Cust Per Yr			-\$18.80
Forecast TY 2005			
No. Cust			500
Revenue Adjustment			-\$9,402.07

Rates: For Single Phase Bill Analysis

Proposed Schedule R	
Customer Charge, \$/Month	\$10.00
Energy Charge, ¢/kWh	17.3318
Proposed TOU-R	
Customer Charge, \$/Month	\$11.50
Priority Peak Energy, ¢/kWh	22.3318
Mid-Peak Energy, ¢/kWh	19.3318
Off-Peak Energy, ¢/kWh	13.8318

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

DETERMINATION OF TEST-YEAR BILLING LOADS

	<u>RECORDED</u>	<u>FORECASTED</u>
<u>TOTAL G:</u>		
SALES, MWH	358,387.3	377,500
NO. OF BILLS	302,189	307,548

DISTRIBUTION OF SALES AND BILLS BY PHASE

	<u>MWH SALES</u>		<u>NO. OF BILLS</u>	
<u>RECORDED:</u>	<u>SALES (MWH)</u>	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>
1 PHASE	162,106.8	45.2	190,082	62.9
3 PHASE	<u>196,280.5</u>	<u>54.8</u>	<u>112,107</u>	<u>37.1</u>
TOTAL	358,387.3	100.0	302,189	100.0
<u>FORECAST:</u>	<u>PERCENT OF TOTAL</u>	<u>SALES (MWH)</u>	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>
1 PHASE	45.2	170,630	62.9	193,448
3 PHASE	<u>54.8</u>	<u>206,870</u>	<u>37.1</u>	<u>114,100</u>
TOTAL	100.0	377,500	100.0	307,548

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR DISTRIBUTION PRIMARY (DP) SERVICE

	<u>AT PRESENT RATES</u>		<u>AT PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH</u>				
TOTAL G:	358,387	377,500		377,500
PRIMARY SVC.	67.365	72		72
% OF TOTAL	0.019%			
	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
BILLING	UNIT PRICE	REVENUES	UNIT PRICE	REVENUES
UNITS	CENTS/KWH	\$1000S	CENTS/KWH	\$1000S
MWH				
ENERGY CHARGE:	72	11.1570	\$8.0	16.2616
				\$11.7
	<u>% ADJ.</u>		<u>% ADJ.</u>	
DP ADJUSTMENT:	-1.9	(\$0.2)	-2.1	(\$0.2)

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR DISTRIBUTION SECONDARY (DS) SERVICE

	<u>AT PRESENT RATES</u>		<u>AT PROPOSED RATES</u>		
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>	
<u>SALES, MWH</u>					
TOTAL G:	358,387	377,500		377,500	
PRIMARY SVC.	20.016	23		23	
% OF TOTAL	0.006%				
	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>		
BILLING	UNIT PRICE	REVENUES	UNIT PRICE	REVENUES	
UNITS	CENTS/KWH	\$1000S	CENTS/KWH	\$1000S	
<u>MWH</u>	<u>CENTS/KWH</u>	<u>\$1000S</u>	<u>CENTS/KWH</u>	<u>\$1000S</u>	
ENERGY CHARGE:	23	11.1570	\$2.6	16.2616	\$3.7
	<u>% ADJ.</u>		<u>% ADJ.</u>		
DS ADJUSTMENT:		-0.7	\$0.0	-0.6	\$0.0

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR MINIMUM CHARGE PROVISION

<u>1 PHASE</u>	<u>PRESENT RATES</u>	<u>PROPOSED RATES</u>
MINIMUM CHRG., \$/MO.	25.00	40.00
BASE RATE, \$/KWH	0.111570	0.162616
F.O.A., \$/KWH	0.054140	0.000000
CUSTOMER CHRG., \$/MO.	20.00	35.00
MINIMUM KWH/MONTH	30.17	30.75
 <u>3 PHASE</u>	 <u>PRESENT RATES</u>	 <u>PROPOSED RATES</u>
MINIMUM CHRG., \$/MO.	45.00	60.00
BASE RATE, \$/KWH	0.11157	0.162616
F.O.A., \$/KWH	0.054140	0.000000
CUSTOMER CHRG., \$/MO.	45.00	60.00
MINIMUM KWH/MONTH	0.00	0.00

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR MINIMUM CHARGE PROVISION

	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH</u>				
TOTAL G	358,387.3	377,500	358,387.3	377,500
LT/EQ TO MIN. KWH				
1 PHASE	153.3		153.3	
3 PHASE	<u>0.0</u>		<u>0.0</u>	
TOTAL	153.3	162	153.3	162
% OF TOTAL	0.043	0.043	0.043	0.043
<u>NUMBER OF BILLS</u>				
TOTAL G	302,189	307,548	302,189	307,548
LT/EQ TO MIN. KWH				
1 PHASE	20,011	20,360	20,011	20,360
3 PHASE	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL	20,011	20,360	20,011	20,360
% OF TOTAL	6.62	6.62	6.62	6.62

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE G - GENERAL SERVICE NON-DEMAND

ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS
FOR MINIMUM CHARGE PROVISION

	<u>PRESENT RATES</u>			<u>PROPOSED RATES</u>		
	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>
IF NO PROVISION FOR MINIMUM CHRG.	<u>MWH</u>	<u>\$/kWh</u>		<u>MWH</u>	<u>\$/kWh</u>	
ENERGY CHARGE:	162	11.1570	\$18.1	162	16.2616	\$26.3
FUEL OIL ADJUSTMEI	162	5.414	<u>\$8.8</u>	162	0.000	<u>\$0.0</u>
SUBTOTAL			\$26.9			\$26.3
	<u>BILLS</u>	<u>\$/MONTH</u>		<u>BILLS</u>	<u>\$/MONTH</u>	
CUSTOMER CHARGE						
1 PHASE	20,360	20.00	\$407.2	20,360	35.00	\$712.6
3 PHASE	-	45.00	<u>\$0.0</u>	-	60.00	<u>\$0.0</u>
SUBTOTAL	20,360		<u>\$407.2</u>	20,360		<u>\$712.6</u>
Total Billed w/o Min Charge			<u>\$434.1</u>			<u>\$738.9</u>
	<u>BILLS</u>	<u>\$/MONTH</u>		<u>BILLS</u>	<u>\$/MONTH</u>	
AS BILLED WITH MINIMUM CHARGE:						
1 PHASE	20,360	25.00	\$509.0	20,360	40.00	\$814.4
3 PHASE	-	45.00	<u>\$0.0</u>	-	60.00	<u>\$0.0</u>
Total Billed with Min Charge			<u>\$509.0</u>			<u>\$814.4</u>
MINIMUM BILL ADJUSTMENT			\$74.9			\$75.5

Hawaiian Electric Company, Inc.

Comparison of Schedule G Class Load Study Customers, Proposed Schedule G vs. Proposed TOU-C
Summary of Customers Who Are Better Off on Proposed TOU-C
Derivation of Schedule TOU-C Adjustment on Proposed Schedule G

<u>Month</u>	<u>N</u> a	<u>At Proposed</u> <u>Sch G Rates</u> b	<u>At TOU-C</u> <u>Non-Demand</u> c	<u>Diff</u> d = c - b	<u>% Diff</u> e = d + b
Jan-03	29	\$11,076.34	\$10,577.30	-\$499.04	-4.51%
Feb-03	29	\$10,144.99	\$9,672.32	-\$472.67	-4.66%
Mar-03	29	\$11,358.93	\$10,817.27	-\$541.66	-4.77%
Apr-03	29	\$10,545.08	\$10,046.67	-\$498.41	-4.73%
May-03	29	\$10,359.76	\$9,817.61	-\$542.15	-5.23%
Jun-03	29	\$10,637.03	\$10,100.45	-\$536.58	-5.04%
Jul-03	29	\$10,969.09	\$10,414.71	-\$554.38	-5.05%
Aug-03	29	\$10,833.27	\$10,232.24	-\$601.03	-5.55%
Sep-03	29	\$10,624.83	\$10,105.03	-\$519.80	-4.89%
Oct-03	29	\$11,042.87	\$10,538.23	-\$504.64	-4.57%
Nov-03	29	\$10,381.29	\$9,891.48	-\$489.81	-4.72%
Dec-03	29	\$10,668.24	\$10,199.01	-\$469.23	-4.40%
Total	29	\$128,641.72	\$122,412.32	-\$6,229.40	-4.84%

Per Customer - \$214.81

Estimated TOU-C Adj. For Schedule G
Per 200 Customers @ Per Customer Savings - \$42,961.38

	<u>Prop Sch G</u>	<u>Prop TOU-C</u>	<u>Difference</u> <u>TOU-C - G</u>
Customer Charge, 1 Phase, \$/Month	\$35.00	\$35.00	\$0.00
Customer Charge, 3 Phase, \$/Month	\$60.00	\$60.00	\$0.00
Energy Charge, ¢/kWh	16.2616		
Minimum Charge, 3 Phase, \$/Month	\$40.00	\$40.00	\$0.00
Minimum Charge, 1 Phase, \$/Month	\$60.00	\$60.00	\$0.00
Energy Charge, Priority Peak, ¢/kWh		21.2616	5.0000
Energy Charge, Mid-Peak, ¢/kWh		18.2616	2.0000
Energy Charge, Off-Peak, ¢/kWh		11.2616	-5.0000

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Service Phase

	MWH SALES		NO. OF BILLS	
	SALES (MWH)	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL
<u>RECORDED:</u>				
1 PHASE	58,791.8	3.05	6,375	8.27
3 PHASE	1,867,344.3	96.95	70,675	91.73
TOTAL	1,926,136.1	100.00	77,050	100.00
	PERCENT OF TOTAL	SALES (MWH)	PERCENT OF TOTAL	NUMBER OF BILLS
<u>FORECAST:</u>				
1 PHASE	3.05	61,397	8.27	6,629
3 PHASE	96.95	1,951,604	91.73	73,531
TOTAL	100.00	2,013,000	100.00	80,160

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of TY Billing Loads For TP Voltage Service

	AT PRESENT RATES		AT PROPOSED RATES	
	Recorded	Forecast	Recorded	Forecast
<u>Sales (MWH):</u>				
TOTAL SCHEDULE J:	1,926,136.1	2,013,000		2,013,000
TP Voltage Service	1,887.6	2,013		2,013
PERCENT OF TOTAL	0.10			
<u>Number Of Bills:</u>				
TOTAL SCHEDULE J:	77,050	80,160		80,160
TP Voltage Service	8	8		8
PERCENT OF TOTAL	0.01			

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Rate Block For TP Voltage Service

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,887.6	100.00	8	100.00
201 - 400 KWH/KW	-	0.00	-	0.00
> 400 KWH/KW	-	0.00	-	0.00
TOTAL	1,887.6	100.00	8	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	100.00	2,013	100.00	8
201 - 400 KWH/KW	0.00	0	0.00	-
> 400 KWH/KW	0.00	0	0.00	-
TOTAL	100.00	2,013	100.00	8

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,887.6	100.00	8	100.00
201 - 400 KWH/KW	-	0.00	-	0.00
> 400 KWH/KW	-	0.00	-	0.00
TOTAL	1,887.6	100.00	8	100.00

FORECAST AT PROPOSED RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	100.00	2,013	100.00	8
201 - 400 KWH/KW	0.00	0	0.00	-
> 400 KWH/KW	0.00	0	0.00	-
TOTAL	100.00	2,013	100.00	8

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Rate Block For TP Voltage Service

At Present Rates	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	118,233.6	15.97	126,128	126,128
201 - 400 KWH/KW	-	0.00	0	0
> 400 KWH/KW	0.0	0.00	0	0
TOTAL	118,233.6	15.97	126,128	126,128

At Proposed Rates	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	122,546.4	15.40	130,714	130,714
201 - 400 KWH/KW	-	0.00	0	0
> 400 KWH/KW	0.0	0.00	0	0
TOTAL	122,546.4	0.00	130,714	130,714

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Rate Block For TP Voltage Service

AT PRESENT RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	2,013	0	0	2,013
201 - 400 KWH/KW	0	0	0	0
> 400 KWH/KW	0	0	0	0
TOTAL	2,013	0	0	2,013

FORECAST AT PRESENT RATES:

SALES-MWH	2,013	0	0	2,013
BILLS	8	0	0	8
KW, BILLED	126,128	0	0	126,128

AT PROPOSED RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK</u>				
0 - 200 KWH/KW	2,013	0	0	2,013
201 - 400 KWH/KW	0	0	0	0
> 400 KWH/KW	0	0	0	0
TOTAL	2,013	0	0	2,013

FORECAST AT PROPOSED RATES:

SALES-MWH	2,013	-	-	2,013
BILLS	8	-	-	8
KW, BILLED	130,714	-	-	130,714

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of TY Revenues For TP Voltage Service

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>			<u>¢/kWh</u>	
0 - 200 KWH/KW	2,013	8.6900	\$174.9	2,013	13.6400	\$274.6
201 - 400 KWH/KW	-	7.5419	\$0.0	-	12.4919	\$0.0
> 400 KWH/KW	-	6.5130	\$0.0	-	11.4629	\$0.0
TOTAL	2,013		\$174.9	2,013		\$274.6
<u>DEMAND CHARGE:</u>	<u>KW</u>	<u>\$/KW</u>			<u>\$/KW</u>	
	126,128	5.75	\$725.2	130,714	8.50	\$1,111.1
TOTAL			\$900.1			\$1,385.7
		<u>% ADJ.</u>			<u>% ADJ.</u>	
TP Voltage Adj		-3.3	(\$29.7)		-3.0	(\$41.6)

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of TY Billing Loads For TS Voltage Service

	AT PRESENT RATES		AT PROPOSED RATES	
	Recorded	Forecast	Recorded	Forecast
<u>Sales (MWH):</u>				
TOTAL SCHEDULE J:	1,926,136.1	2,013,000		2,013,000
TS Voltage Service	379.6	403		403
PERCENT OF TOTAL	0.02			
<u>Number Of Bills:</u>				
TOTAL SCHEDULE J:	77,050	80,160		80,160
TS Voltage Service	14	16		16
PERCENT OF TOTAL	0.02			

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Determination of Billing Loads By Rate Block For TS Voltage Service

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	143.3	37.75	8	57.14
201 - 400 KWH/KW	13.6	3.58	2	14.29
> 400 KWH/KW	222.7	58.67	4	28.57
TOTAL	379.6	100.00	14	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	37.75	152	57.14	9
201 - 400 KWH/KW	3.58	14	14.29	2
> 400 KWH/KW	58.67	237	28.57	5
TOTAL	100.00	403	100.00	16

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	143.3	37.75	8	57.14
201 - 400 KWH/KW	13.6	3.58	2	14.29
> 400 KWH/KW	222.7	58.67	4	28.57
TOTAL	379.6	100.00	14	100.00

FORECAST AT PROPOSED RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	37.75	152	57.14	9
201 - 400 KWH/KW	3.58	14	14.29	2
> 400 KWH/KW	58.67	237	28.57	5
TOTAL	100.00	403	100.00	16

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Determination of Billing Loads By Rate Block For TS Voltage Service

AT PRESENT RATES	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	6,991.0	20.50	7,416	7,416
201 - 400 KWH/KW	50.0	272.00	51	51
> 400 KWH/KW	100.0	2,227.00	106	106
TOTAL	7,141.0	53.16	7,573	7,573

AT PROPOSED RATES	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	6,991.0	20.50	7,416	7,416
201 - 400 KWH/KW	50.0	272.00	51	51
> 400 KWH/KW	100.0	2,227.00	106	106
TOTAL	7,141.0	53.16	7,573	7,573

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Determination of Billing Loads By Rate Block For TS Voltage Service

	AT PRESENT RATES			
	LOAD FACTOR BLOCK (KWH/KW)			
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	152	10	21	183
201 - 400 KWH/KW	0	4	21	25
> 400 KWH/KW	0	0	195	195
TOTAL	152	14	237	403

FORECAST AT PRESENT RATES:

SALES-MWH	152	14	237	403
BILLS	9	2	5	16
KW, BILLED	7,416	51	106	7,573

	AT PROPOSED RATES			
	LOAD FACTOR BLOCK (KWH/KW)			
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK</u>				
0 - 200 KWH/KW	152	10	21	183
201 - 400 KWH/KW	0	4	21	25
> 400 KWH/KW	0	0	195	195
TOTAL	152	14	237	403

FORECAST AT PROPOSED RATES:

SALES-MWH	152	14	237	403
BILLS	9	2	5	16
KW, BILLED	7,416	51	106	7,573

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Determination of TY Revenues For TS Voltage Service

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>			<u>¢/kWh</u>	
0 - 200 KWH/KW	183	8.6900	\$15.9	183	13.6400	\$25.0
201 - 400 KWH/KW	25	7.5419	\$1.9	25	12.4919	\$3.1
> 400 KWH/KW	195	6.5130	\$12.7	195	11.4629	\$22.4
TOTAL	403		\$30.5	403		\$50.5
<u>DEMAND CHARGE:</u>	<u>kW</u>	<u>\$/KW</u>			<u>\$/KW</u>	
	7,573	5.75	\$43.5	7,573	8.50	\$64.4
TOTAL			\$74.0			\$114.9
		<u>% ADJ.</u>			<u>% ADJ.</u>	
TS Voltage Adj		-2.4	(\$1.8)		-2.4	(\$2.8)

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Determination of TY Billing Loads For Primary Voltage Service

	AT PRESENT RATES		AT PROPOSED RATES	
	Recorded	Forecast	Recorded	Forecast
<u>Sales (MWH):</u>				
TOTAL SCHEDULE J:	1,926,136.1	2,013,000		2,013,000
Primary Voltage Service	197,066.2	205,930		205,930
PERCENT OF TOTAL	10.23			
<u>Number Of Bills:</u>				
TOTAL SCHEDULE J:	77,050	80,160		80,160
Primary Voltage Service	1,513	1,571		1,571
PERCENT OF TOTAL	1.96			

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Determination of Billing Loads By Rate Block For Primary Voltage Service

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	30,189.5	15.32	239	15.80
201 - 400 KWH/KW	95,862.1	48.64	757	50.03
> 400 KWH/KW	71,014.6	36.04	517	34.17
TOTAL	197,066.2	100.00	1,513	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	15.32	31,548	15.80	248
201 - 400 KWH/KW	48.64	100,164	50.03	786
> 400 KWH/KW	36.04	74,218	34.17	537
TOTAL	100.00	205,930	100.00	1,571

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Determination of Billing Loads By Rate Block For Primary Voltage Service

	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	258,295.7	116.88	269,918	297,309
201 - 400 KWH/KW	319,076.6	300.44	333,391	347,127
> 400 KWH/KW	134,082.2	529.63	140,132	124,928
TOTAL	711,454.5	276.99	743,441	769,364

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Determination of Billing Loads By Rate Block For Primary Voltage Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	31,286.6	19.16	186	15.66
201 - 400 KWH/KW	82,210.6	50.33	630	53.03
> 400 KWH/KW	49,832.1	30.51	372	31.31
TOTAL	163,329.3	100.00	1,188	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	19.16	39,456	15.66	246
201 - 400 KWH/KW	50.33	103,645	53.03	833
> 400 KWH/KW	30.51	62,829	31.31	492
TOTAL	100.00	205,930	100.00	1,571

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	34,864.2	21.35	204	17.17
201 - 400 KWH/KW	84,938.3	52.00	655	55.14
> 400 KWH/KW	43,526.8	26.65	329	27.70
TOTAL	163,329.3	100.00	1,188	100.00

FORECAST AT PROPOSED RATES:

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	21.35	43,966	17.17	270
201 - 400 KWH/KW	52.00	107,084	55.14	866
> 400 KWH/KW	26.65	54,880	27.70	435
TOTAL	100.00	205,930	100.00	1,571

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Determination of Billing Loads By Rate Block For Primary Voltage Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	247,797.7	126.26	312,498	
201 - 400 KWH/KW	269,435.9	305.12	339,686	
> 400 KWH/KW	102,373.0	486.77	129,073	
TOTAL	619,606.6	263.60	781,257	

AT PROPOSED RATES	RECORDED		KW FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	272,949.1	127.73		344,210
201 - 400 KWH/KW	280,534.3	302.77		353,681
> 400 KWH/KW	91,264.2	476.93		115,069
TOTAL	644,747.6	253.32		812,960

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Determination of Billing Loads By Rate Block For Primary Voltage Service

AT PRESENT RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	31,548	66,678	28,026	126,252
201 - 400 KWH/KW	0	33,486	28,026	61,512
> 400 KWH/KW	0	0	18,166	18,166
TOTAL	31,548	100,164	74,218	205,930

FORECAST AT PRESENT RATES:

SALES-MWH	31,548	100,164	74,218	205,930
BILLS	248	786	537	1,571
KW, BILLED	269,918	333,391	140,132	743,441

AT PROPOSED RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK</u>				
0 - 200 KWH/KW	43,966	69,425	24,986	138,377
201 - 400 KWH/KW	0	37,659	24,986	62,645
> 400 KWH/KW	0	0	4,908	4,908
TOTAL	43,966	107,084	54,880	205,930

FORECAST AT PROPOSED RATES:

SALES-MWH	43,966	107,084	54,880	205,930
BILLS	270	866	435	1,571
KW, BILLED	297,309	347,127	124,928	769,364

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Determination of TY Revenues For Primary Voltage Service

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>		<u>MWH</u>	<u>¢/kWh</u>	
0 - 200 KWH/KW	126,252	8.6900	\$10,971.3	138,377	13.6400	\$18,874.6
201 - 400 KWH/KW	61,512	7.5419	\$4,639.2	62,645	12.4919	\$7,825.6
> 400 KWH/KW	18,166	6.5130	\$1,183.2	4,908	11.4629	\$562.6
TOTAL	205,930		\$16,793.7	205,930		\$27,262.8
<u>DEMAND CHARGE:</u>	<u>kW</u>	<u>\$/KW</u>		<u>kW</u>	<u>\$/KW</u>	
	743,441	5.75	\$4,274.8	769,364	8.50	\$6,539.6
TOTAL			\$21,068.5			\$33,802.4
		<u>% ADJ.</u>			<u>% ADJ.</u>	
DP Voltage Adjustment		-1.9	(\$400.3)		-2.1	(\$709.9)

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Determination of TY Billing Loads For Primary Voltage, Secondary Metering Service

	<u>AT PRESENT RATES</u>		<u>AT PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH:</u>				
TOTAL J:	1,926,136.1	2,013,000		2,013,000
Secondary Metering Adj.	21,451.8	22,344		22,344
PERCENT OF TOTAL	1.11			
<u>NUMBER OF BILLS:</u>				
TOTAL J:	77,050	80,160		80,160
Secondary Metering Adj.	264	273		273
PERCENT OF TOTAL	0.34			

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Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,547.7	7.22	18	6.82
201 - 400 KWH/KW	12,309.3	57.38	159	60.23
> 400 KWH/KW	7,594.8	35.40	87	32.95
TOTAL	21,451.8	100.00	264	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	7.22	1,613	6.82	19
201 - 400 KWH/KW	57.38	12,821	60.23	164
> 400 KWH/KW	35.40	7,910	32.95	90
TOTAL	100.00	22,344	100.00	273

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Determination of Billing Loads By Rate Block For Secondary Voltage Service

	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	8,544.9	181.13	8,905	11,484
201 - 400 KWH/KW	40,979.4	300.38	42,683	44,000
> 400 KWH/KW	15,027.8	505.39	15,651	14,541
TOTAL	64,552.1	332.32	67,239	70,025

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Determination of Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,141.4	6.90	12	5.88
201 - 400 KWH/KW	9,410.7	56.89	124	60.78
> 400 KWH/KW	5,990.9	36.21	68	33.34
TOTAL	16,543.0	100.00	204	100.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	6.90	1,542	5.88	16
201 - 400 KWH/KW	56.89	12,712	60.78	166
> 400 KWH/KW	36.21	8,090	33.34	91
TOTAL	100.00	22,344	100.00	273

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,487.1	8.99	18	8.83
201 - 400 KWH/KW	9,612.2	58.10	124	60.78
> 400 KWH/KW	5,443.7	32.91	62	30.39
TOTAL	16,543.0	100.00	204	100.00

FORECAST AT PROPOSED RATES:

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	8.99	2,009	8.83	24
201 - 400 KWH/KW	58.10	12,982	60.78	166
> 400 KWH/KW	32.91	7,353	30.39	83
TOTAL	100.00	22,344	100.00	273

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Determination of Billing Loads By Rate Block For Secondary Voltage Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

At PRESENT RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	6,703.9	170.26	9,057	
201 - 400 KWH/KW	29,767.8	316.14	40,210	
> 400 KWH/KW	11,345.7	528.03	15,321	
TOTAL	47,817.4	345.96	64,588	

At PROPOSED RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	8,645.4	172.01		11,680
201 - 400 KWH/KW	30,691.3	313.19		41,451
> 400 KWH/KW	10,538.0	516.58		14,234
TOTAL	49,874.7	331.69		67,365

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Determination of Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

	PRESENT RATES			
	LOAD FACTOR BLOCK (KWH/KW)			
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	1,613	8,537	3,130	13,280
201 - 400 KWH/KW	0	4,284	3,130	7,414
> 400 KWH/KW	0	0	1,650	1,650
TOTAL	1,613	12,821	7,910	22,344

FORECAST AT PRESENT RATES:

SALES-MWH	1,613	12,821	7,910	22,344
BILLS	19	164	90	273
KW, BILLED	8,905	42,683	15,651	67,239

	PROPOSED RATES			
	LOAD FACTOR BLOCK (KWH/KW)			
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	2,009	8,800	2,908	13,717
201 - 400 KWH/KW	0	4,182	2,908	7,090
> 400 KWH/KW	0	0	1,537	1,537
TOTAL	2,009	12,982	7,353	22,344

FORECAST AT PROPOSED RATES:

SALES-MWH	2,009	12,982	7,353	22,344
BILLS	24	166	83	273
KW, BILLED	11,484	44,000	14,541	70,025

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Determination of TY Revenues For Primary Voltage, Secondary Metering Service

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>		<u>MWH</u>	<u>¢/kWh</u>	
0 - 200 KWH/KW	13,280	8.6900	\$1,154.0	13,717	13.6400	\$1,871.0
201 - 400 KWH/KW	7,414	7.5419	\$559.2	7,090	12.4919	\$885.7
> 400 KWH/KW	1,650	6.5130	\$107.5	1,537	11.4629	\$176.2
TOTAL	22,344		\$1,820.7	22,344		\$2,932.9
<u>DEMAND CHARGE:</u>	<u>kW</u>	<u>\$/KW</u>		<u>kW</u>	<u>\$/KW</u>	
	67,239	5.75	\$386.6	70,025	8.50	\$595.2
Energy & Demand			\$2,207.3			\$3,528.1
		<u>% Adj.</u>			<u>% Adj.</u>	
DS Voltage Adjustment		(0.7)	(\$15.5)		(0.6)	(\$21.2)

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Determination of TY Billing Loads For Network Service

	<u>AT PRESENT RATES</u>		<u>AT PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH:</u>				
TOTAL J:	-	-	1,926,136.1	2,013,000
Network Service	-	-	54,147.3	56,565
PERCENT OF TOTAL			2.81	
<u>NUMBER OF BILLS:</u>				
TOTAL J:	-	-	77,050	80,160
Network Service	-	-	1,832	1,908
PERCENT OF TOTAL			2.38	

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Determination of Billing Loads By Rate Block For Network Service

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	-			
201 - 400 KWH/KW	-			
> 400 KWH/KW	-			
TOTAL	-	0.00		0.00

FORECAST AT PRESENT RATES:

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	0.00	0	0.00	0
201 - 400 KWH/KW	0.00	0	0.00	0
> 400 KWH/KW	0.00	0	0.00	0
TOTAL	0.00	0	0.00	0

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	1,802.3	3.33	232	12.66
201 - 400 KWH/KW	45,126.7	83.34	1,422	77.62
> 400 KWH/KW	7,218.3	13.33	178	9.72
TOTAL	54,147.3	100.00	1832	100.00

FORECAST AT PROPOSED RATES:

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	3.33	1,883	12.66	242
201 - 400 KWH/KW	83.34	47,141	77.62	1,481
> 400 KWH/KW	13.33	7,541	9.72	185
TOTAL	100.00	56,565	100.00	1,908

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Rate Block For Network Service

At PRESENT RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	-			
201 - 400 KWH/KW	-			
> 400 KWH/KW	-			
TOTAL	-		-	-

At PROPOSED RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS:</u>				
0 - 200 KWH/KW	11,021.5	163.53	-	11,515
201 - 400 KWH/KW	143,393.5	314.71	-	149,792
> 400 KWH/KW	15,400.3	468.71	-	16,089
TOTAL	169,815.3	318.86	-	177,396

Determination of Billing Loads By Rate Block For Network Service

PRESENT RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	0	0	0	0
201 - 400 KWH/KW	0	0	0	0
> 400 KWH/KW	0	0	0	0
TOTAL	0	0	0	0

FORECAST AT PRESENT RATES:

SALES-MWH	0	0	0	0
BILLS	0	0	0	0
KW, BILLED	0	0	0	0

PROPOSED RATES				
LOAD FACTOR BLOCK (KWH/KW)				
	0 - 200	201 - 400	> 400	TOTAL
<u>LOAD FACTOR BLOCK:</u>				
0 - 200 KWH/KW	1,883	29,958	3,218	35,059
201 - 400 KWH/KW	0	17,183	3,218	20,401
> 400 KWH/KW	0	0	1,105	1,105
TOTAL	1,883	47,141	7,541	56,565

FORECAST AT PROPOSED RATES:

SALES-MWH	1,883	47,141	7,541	56,565
BILLS	242	1,481	185	1,908
KW, BILLED	11,515	149,792	16,089	177,396

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of TY Revenues For Network Service

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>		<u>MWH</u>	<u>¢/kWh</u>	
0 - 200 KWH/KW	0	8.6900	-	35,059	13.6400	\$4,782.0
201 - 400 KWH/KW	0	7.5419	-	20,401	12.4919	\$2,548.5
> 400 KWH/KW	0	6.5130	-	1,105	11.4629	\$126.7
TOTAL	0		-	56,565		\$7,457.2
	<u>kW</u>	<u>\$/kW</u>		<u>kW</u>	<u>\$/kW</u>	
<u>DEMAND CHARGE:</u>	0	5.75	-	177,396	8.50	\$1,507.9
Energy & Demand			-			\$8,965.1
	<u>% Adj.</u>			<u>% Adj.</u>		
Network Service Adj		0.0	-		0.9	\$80.7

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
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Determination of Billing Loads By Rate Block For Total J

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	151,219.6	7.85	12,664	16.44
201 - 400 KWH/KW	917,306.7	47.62	44,935	58.32
> 400 KWH/KW	857,609.8	44.53	19,451	25.24
TOTAL	1,926,136.1	100.00	77,050	100.00
<u>FORECAST:</u>				
	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	7.85	158,021	16.44	13,178
201 - 200 KWH/KW	47.62	958,591	58.32	46,749
> 400 KWH/KW	44.53	896,388	25.24	20,233
TOTAL	100.00	2,013,000	100.00	80,160

HAWAIIAN ELECTRIC COMPANY, INC.
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Determination of Billing Loads By Rate Block For Total J

LOAD FACTOR BLOCKS:	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
0 - 200 KWH/KW	1,375,768.0	109.92	1,437,600	1,628,999
201 - 400 KWH/KW	3,088,584.3	297.00	3,227,579	3,425,909
> 400 KWH/KW	1,728,333.0	496.21	1,806,469	1,686,388
TOTAL	6,192,685.3	311.03	6,471,648	6,741,296

HAWAIIAN ELECTRIC COMPANY, INC.
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Determination of Billing Loads By Rate Block For Total J

<u>LOAD FACTOR BLOCK:</u>	<u>PRESENT RATES</u>			
	<u>LOAD FACTOR BLOCK (KWH/KW)</u>			
	<u>0 - 200</u>	<u>201 - 400</u>	<u>> 400</u>	<u>TOTAL</u>
0 - 200 KWH/KW	158,021	645,516	361,294	1,164,831
201 - 400 KWH/KW	0	313,075	361,294	674,369
> 400 KWH/KW	0	0	173,800	173,800
TOTAL	158,021	958,591	896,388	2,013,000

FORECAST AT PRESENT RATES:

SALES - MWH	158,021	958,591	896,388	2,013,000
BILLS	13,178	46,749	20,233	80,160
KW, BILLED	1,437,600	3,227,579	1,806,469	6,471,648

<u>LOAD FACTOR BLOCK:</u>	<u>PROPOSED RATES</u>			
	<u>LOAD FACTOR BLOCK (KWH/KW)</u>			
	<u>0 - 200</u>	<u>201 - 400</u>	<u>> 400</u>	<u>TOTAL</u>
0 - 200 KWH/KW	184,190	685,182	337,278	1,206,650
201 - 400 KWH/KW	0	301,389	337,278	638,667
> 400 KWH/KW	0	0	167,683	167,683
TOTAL	184,190	986,571	842,238	2,013,000

FORECAST AT PROPOSED RATES:

SALES - MWH	184,190	986,571	842,239	2,013,000
BILLS	13,050	47,230	19,880	80,160
KW, BILLED	1,628,999	3,425,909	1,686,388	6,741,296

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
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Determination of Billing Loads By Rate Block For Total J

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	129,504.4	7.99	8,797	14.62
201 - 400 KWH/KW	752,043.9	46.37	34,768	57.80
> 400 KWH/KW	740,146.8	45.64	16,591	27.58
TOTAL	1,621,695.1	100.00	60,156	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	7.99	160,839	14.62	11,719
201 - 200 KWH/KW	46.37	933,428	57.80	46,332
> 400 KWH/KW	45.64	918,733	27.58	22,109
TOTAL	100.00	2,013,000	100.00	80,160

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	148,415.9	9.15	9,794	16.28
201 - 400 KWH/KW	794,814.6	49.01	35,446	58.92
> 400 KWH/KW	678,464.7	41.84	14,916	24.80
TOTAL	1,621,695.1	100.00	60,156	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	9.15	184,190	16.28	13,050
201 - 200 KWH/KW	49.01	986,571	58.92	47,230
> 400 KWH/KW	41.84	842,239	24.80	19,880
TOTAL	100.00	2,013,000	100.00	80,160

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
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Determination of Billing Loads By Rate Block For Total J

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	RECORDED		FORECAST	
LOAD FACTOR BLOCKS:	KW	KWH/KW	PRESENT	PROPOSED
0 - 200 KWH/KW	949,398.4	136.41	1,179,085	
201 - 400 KWH/KW	2,519,163.3	298.53	3,126,748	
> 400 KWH/KW	1,495,490.5	494.92	1,856,326	
TOTAL	4,964,052.2	326.69	6,162,159	

AT PROPOSED RATES	RECORDED		FORECAST	
LOAD FACTOR BLOCKS:	KW	KWH/KW	PRESENT	PROPOSED
0 - 200 KWH/KW	1,076,550.4	137.86		1,336,066
201 - 400 KWH/KW	2,673,772.4	297.26		3,318,882
> 400 KWH/KW	1,395,967.2	486.02		1,732,931
TOTAL	5,146,290.0	315.12		6,387,879

HAWAIIAN ELECTRIC COMPANY, INC.
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Determination of Billing Loads By Rate Block For kWh > 200

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	¢/kWh	MWH	¢/kWh
RECORDED:				
0 - 200 KWH/KW	57,224.3	8.23	712	12.81
201 - 400 KWH/KW	341,181.9	49.05	2,807	50.52
> 400 KWH/KW	297,117.6	42.72	2,037	36.67
TOTAL	695,523.8	100.00	5,556	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	8.23	59,823	12.81	740
201 - 400 KWH/KW	49.05	356,540	50.52	2,920
> 400 KWH/KW	42.72	310,527	36.67	2,120
TOTAL	100.00	726,890	100.00	5,780

AT PROPOSED RATES
Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
RECORDED:				
0 - 200 KWH/KW	62,180.8	10.66	650	14.19
201 - 400 KWH/KW	296,821.5	50.91	2,388	52.13
> 400 KWH/KW	224,077.3	38.43	1,543	33.68
TOTAL	583,079.6	100.00	4,581	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	10.66	77,486	14.19	820
201 - 400 KWH/KW	50.91	370,060	52.13	3,013
> 400 KWH/KW	38.43	279,344	33.68	1,947
TOTAL	100.00	726,890	100.00	5,780

	RECORDED		FORECAST	
LOAD FACTOR BLOCKS	KW	KWH/KW	PRESENT	PROPOSED
0 - 200 KWH/KW	702,089.1	81.51	733,934	781,577
201 - 400 KWH/KW	1,131,481.0	301.54	1,182,397	1,245,377
> 400 KWH/KW	602,114.9	493.46	629,285	595,837
TOTAL	2,435,685.0	285.56	2,545,616	2,622,791

AT PRESENT RATES	LOAD FACTOR BLOCK (KWH/KW)			
LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL
0 - 200 KWH/KW	59,823	236,479	125,857	422,159
201 - 400 KWH/KW	0	120,061	125,857	245,918
> 400 KWH/KW	0	0	58,813	58,813
TOTAL	59,823	356,540	310,527	726,890

AT PROPOSED RATES	LOAD FACTOR BLOCK (KWH/KW)			
LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL
0 - 200 KWH/KW	77,486	249,075	119,167	445,728
201 - 400 KWH/KW	0	120,985	119,167	240,152
> 400 KWH/KW	0	0	41,010	41,010
TOTAL	77,486	370,060	279,344	726,890

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Determination of Billing Loads By Rate Block For kWm > 200

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT PRESENT RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	58,167.1	9.74	692	14.32
201 - 400 KWH/KW	291,577.1	48.83	2,418	50.02
> 400 KWH/KW	247,325.1	41.43	1,724	35.66
TOTAL	597,069.3	100.00	4,834	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	9.74	60,777	14.32	720
201 - 200 KWH/KW	48.83	304,697	50.02	2,516
> 400 KWH/KW	41.43	258,522	35.66	1,793
TOTAL	100.00	623,996	100.00	5,029

AT PROPOSED RATES	SALES		NUMBER OF BILLS	
	MWH	% OF TOTAL	BILLS	% OF TOTAL
<u>RECORDED:</u>				
0 - 200 KWH/KW	62,180.8	10.66	650	14.19
201 - 400 KWH/KW	296,821.5	50.91	2,388	52.13
> 400 KWH/KW	224,077.3	38.43	1,543	33.68
TOTAL	583,079.6	100.00	4,581	100.00

FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	10.66	66,518	14.19	714
201 - 200 KWH/KW	50.91	317,676	52.13	2,622
> 400 KWH/KW	38.43	239,802	33.68	1,693
TOTAL	100.00	623,996	100.00	5,029

AT PRESENT RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS</u>				
0 - 200 KWH/KW	453,348.3	128.31	473,673	
201 - 400 KWH/KW	958,806.5	304.10	1,001,963	
> 400 KWH/KW	495,665.7	498.98	518,101	
TOTAL	1,907,820.5	312.96	1,993,737	

AT PROPOSED RATES	RECORDED		FORECAST	
	KW	KWH/KW	PRESENT	PROPOSED
<u>LOAD FACTOR BLOCKS</u>				
0 - 200 KWH/KW	471,537.2	131.87		504,421
201 - 400 KWH/KW	986,056.8	301.02		1,055,332
> 400 KWH/KW	458,391.9	488.83		490,563
TOTAL	1,915,985.9	304.32		2,050,316

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
Schedule J - General Service Demand

Revenues for Power Factor Adjustment for Billing Loads By Rate Block For kWm > 200

	PRESENT RATES			PROPOSED RATES		
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	BILLING UNITS	UNIT PRICE	REVENUES \$000s
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>		<u>MWH</u>	<u>¢/kWh</u>	
0 - 200 KWH/KW	422,159	8.6900	\$36,685.6	445,728	13.6400	\$60,797.3
201 - 400 KWH/KW	245,918	7.5419	\$18,546.9	240,152	12.4919	\$29,999.5
> 400 KWH/KW	58,813	6.5130	\$3,830.5	41,010	11.4629	\$4,700.9
TOTAL	726,890		\$59,063.0	726,890		\$95,497.7
<u>DEMAND CHARGE:</u>	<u>kW</u>	<u>\$/kW</u>		<u>kW</u>	<u>\$/kW</u>	
ALL BILLING KW	2,545,616	5.75	\$14,637.3	2,622,791	8.50	\$22,293.7
Total Demand and Energy			\$73,700.3			\$117,791.4

HAWAIIAN ELECTRIC COMPANY, INC.
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Schedule J - General Service Demand

Estimate of PF Adjustment for kWm > 200 kW Customers

	Recorded	Forecast
SALES (KWH)	695,523,750	
KVARHR	329,938,325	
POWER FACTOR (%)	90.0	90.0
FOR KWM > 200kW	<u>AT PRESENT RATES</u>	<u>AT PROPOSED RATES</u>
CALCULATED PF (%)	90.0	90.0
BASE PF (%)	85.0	85.0
DIFF.	<u>(5.0)</u>	<u>(5.0)</u>
ADJ. FOR EA. 1% DIFF.	0.001	0.001
PF ADJ RATE	-0.005	-0.005
TOTAL DMD + ENGY CHRG	\$73,700.3	\$117,791.4
Power Factor Adjustment (\$000s)	(\$368.5)	(\$589.0)

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE J - General Service Demand
BASED ON DOCKET NO. 04-0113 TEST-YEAR: 2005

SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS
FOR RIDER SERVICE AT PRESENT RATES

<u>RIDER M(B)</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Rider Mb J1	(\$9.3)	(\$11.9)
Rider Mb J2	(\$18.1)	(\$22.5)
Rider Mb J3	(\$10.9)	(\$13.4)
Rider Mb J4	(\$16.3)	(\$21.9)
Rider Mb J5	(\$9.2)	(\$11.7)
Rider Mb J6	(\$7.2)	(\$9.4)
Rider Mb J7	(\$7.7)	(\$10.4)
Rider Mb J8	(\$29.0)	(\$36.0)
Rider Mb J9	(\$15.6)	(\$19.2)
Rider Mb J10	(\$6.7)	(\$8.9)
Rider Mb J11	(\$4.7)	(\$5.9)
Rider Mb J12	(\$4.7)	(\$5.9)
Rider Mb J13	(\$4.7)	(\$5.9)
Rider Mb J14	(\$20.1)	(\$24.7)
Rider Mb J15	(\$2.7)	(\$3.3)
Rider Mb J16	(\$2.7)	(\$3.3)
Total Rider Mb	(\$169.6)	(\$214.3)
<u>RIDER I</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Rider I J1	(\$47.3)	(\$69.8)
Rider I J2	\$0.0	(\$2.6)
Rider I J3	\$0.0	(\$3.4)
Rider I J4	\$0.0	(\$3.4)
Rider I J5	\$0.0	(\$4.4)
Rider I J6	\$0.0	(\$4.9)
Rider I J7	\$0.0	(\$8.0)
Rider I J8	\$0.0	(\$3.7)
Rider I J9	\$0.0	(\$6.0)
Total Rider I	(\$47.3)	(\$104.2)
<u>RIDER T</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Rider T J1	(\$66.1)	(\$76.0)
Rider T J2	(\$0.5)	(\$0.5)
Rider T J3	(\$3.4)	(\$3.5)
Rider T J4	(\$13.9)	(\$14.0)
Rider T J5	(\$13.1)	(\$21.9)
Rider T J6	(\$5.1)	(\$5.2)
Rider T J7	(\$34.9)	(\$33.6)
Rider T J8	(\$39.5)	(\$38.0)
Rider T J9	(\$3.0)	(\$3.1)
Rider T J10	(\$7.9)	(\$6.7)
Rider T J11	(\$1.0)	(\$0.9)
Rider T J12	(\$0.6)	(\$0.5)
Rider T J13	(\$5.7)	(\$7.6)
Rider T J14	(\$5.3)	(\$7.4)
Rider T J15	(\$8.8)	(\$11.1)
Rider T J16	(\$49.1)	(\$58.0)
Rider T J17	(\$34.2)	(\$41.8)
Rider T J18	(\$28.2)	(\$34.1)
Rider T J19	(\$24.1)	(\$29.5)
Rider T J20	(\$1.2)	(\$1.2)
Rider T J21	(\$0.8)	(\$0.8)
Rider T J22	(\$2.4)	(\$2.8)
Rider T J23	(\$1.9)	(\$1.8)
Rider T J24	(\$39.7)	(\$48.4)
TOTAL	(\$388.4)	(\$450.4)
<u>MULTIPLE RIDERS</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Rider Mbl J1	(\$227.9)	(\$327.8)
TOTAL	(\$227.9)	(\$327.8)
<u>SCHEDULE U</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Sch U J1	(\$115.9)	(\$102.4)
Sch U J2	(\$25.9)	(\$27.6)
Sch U J3	(\$78.6)	(\$64.1)
Sch U J4	(\$120.9)	(\$107.0)
TOTAL	(\$339.3)	(\$301.1)
<u>RIDER EDR</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
Rider EDR J1	\$0.0	\$0.0
TOTAL	\$0.0	\$0.0
<u>RULE 4 CHP CUSTOMERS</u>	<u>PRESENT (\$1000s)</u>	<u>PROPOSED (\$1000s)</u>
CHP J1	\$0.0	\$0.0
TOTAL	\$0.0	\$0.0

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb J1

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		113.1		113.1				
Billing kW	124.4	39.6	128.5	43.7				
kWh Per Month	25,613	25,613	25,613	25,613				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	24,880	7,920	25,613	8,740	\$2,162	\$688	\$3,494	\$1,192
201 - 400 kWh/kW	733	7,920	0	8,740	\$55	\$597	\$0	\$1,092
>400 kWh/kW	0	9,773	0	8,133	\$0	\$637	\$0	\$932
Subtotal	25,613	25,613	25,613	25,613	\$2,217	\$1,922	\$3,494	\$3,216
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	124.4	39.6	128.5	43.7	\$715	\$228	\$1,092	\$371
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$2,992	\$2,220	\$4,656	\$3,667
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$2,992	\$2,220	\$4,656	\$3,667
Total Revenue Per Year (\$000s)					\$35.9	\$26.6	\$55.9	\$44.0
Rider Adjustment (\$000s/Yr)						(\$9.3)		(\$11.9)

Hawaiian Electric Company, Inc.
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Rider Mb J2

<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:							
Curtable Load	173.8		173.8				
Billing kW	175.5	45.1	176.2	45.8			
kWh Per Month	64,047	64,047	64,047	64,047			
On-Peak kWh		0		0			
Off-Peak kWh		0		0			
Power Factor	85	85	85	85			
<u>Energy Charge:</u>							
0 - 200 kWh/kW	35,100	9,020	35,240	9,160	\$3,050	\$784	\$4,807
201 - 400 kWh/kW	28,947	9,020	28,807	9,160	\$2,183	\$680	\$3,599
>400 kWh/kW	0	46,007	0	45,727	\$0	\$2,996	\$0
Subtotal	64,047	64,047	64,047	64,047	\$5,233	\$4,460	\$8,406
On-Peak Surcharge		0		0		\$0	\$0
Off-Peak Credit		0		0		\$0	\$0
Rider T Energy Charge Adjustment		0		0		\$0	\$0
<u>Demand Charge:</u>							
Total kWb	175.5	45.1	176.2	45.8	\$1,009	\$259	\$1,498
Customer Charge					\$60	\$60	\$70
Time-of-Day Metering Charge						\$10	\$10
Primary Voltage Service Discount					\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0
Total Base Revenue Per Month					\$6,302	\$4,789	\$9,974
Fuel Oil Adjustment					\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0
Total Revenue Per Month					\$6,302	\$4,789	\$9,974
Total Revenue Per Year (\$000s)					\$75.6	\$57.5	\$119.7
Rider Adjustment (\$000s/Yr)						(\$18.1)	(\$22.5)

Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
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Rider Mb J3

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J3	Rider M(b)	Sch. J	Rider M(b)	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)
Billing Load Per Month:								
Curtailable Load		143.2		143.2				
Billing kW	289.6	182.2	309.2	201.8				
kWh Per Month	81,400	81,400	81,400	81,400				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	100	100	100	100				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	57,920	36,440	61,840	40,360	\$5,033	\$3,167	\$8,435	\$5,505
201 - 400 kWh/kW	23,480	36,440	19,560	40,360	\$1,771	\$2,748	\$2,443	\$5,042
>400 kWh/kW	0	8,520	0	680	\$0	\$555	\$0	\$78
Subtotal	81,400	81,400	81,400	81,400	\$6,804	\$6,470	\$10,878	\$10,625
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	289.6	182.2	309.2	201.8	\$1,665	\$1,048	\$2,628	\$1,715
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					(\$161)	(\$143)	(\$284)	(\$259)
Power Factor Adjustment					(\$127)	(\$113)	(\$203)	(\$185)
Total Base Revenue Per Month					\$8,241	\$7,332	\$13,089	\$11,976
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$8,241	\$7,332	\$13,089	\$11,976
Total Revenue Per Year (\$000s)					\$98.9	\$88.0	\$157.1	\$143.7
Rider Adjustment (\$000s/Yr)						(\$10.9)		(\$13.4)

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Hawaiian Electric Company, Inc.
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Rider Mb J4

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)
Billing Load Per Month:								
Curtailable Load		227.5		227.5				
Billing kW	392.8	222.2	423.5	252.9				
kWh Per Month	85,417	85,417	85,417	85,417				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	68	68	68	68				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	78,560	44,440	84,700	50,580	\$6,827	\$3,862	\$11,553	\$6,899
201 - 400 kWh/kW	6,857	40,977	717	34,837	\$517	\$3,090	\$90	\$4,352
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	85,417	85,417	85,417	85,417	\$7,344	\$6,952	\$11,643	\$11,251
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	392.8	222.2	423.5	252.9	\$2,259	\$1,278	\$3,600	\$2,150
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					(\$182)	(\$156)	(\$320)	(\$281)
Power Factor Adjustment					\$163	\$140	\$259	\$228
Total Base Revenue Per Month					\$9,644	\$8,284	\$15,252	\$13,428
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$9,644	\$8,284	\$15,252	\$13,428
Total Revenue Per Year (\$000s)					\$115.7	\$99.4	\$183.0	\$161.1
Rider Adjustment (\$000s/Yr)						(\$16.3)		(\$21.9)

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Hawaiian Electric Company, Inc.
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Rider Mb J5

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		98.8		98.8				
Billing kW	100.5	26.4	101.0	26.9				
kWh Per Month	28,613	28,613	28,613	28,613				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	20,100	5,280	20,200	5,380	\$1,747	\$459	\$2,755	\$734
201 - 400 kWh/kW	8,513	5,280	8,413	5,380	\$642	\$398	\$1,051	\$672
>400 kWh/kW	0	18,053	0	17,853	\$0	\$1,176	\$0	\$2,046
Subtotal	28,613	28,613	28,613	28,613	\$2,389	\$2,033	\$3,806	\$3,452
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	100.5	26.4	101.0	26.9	\$578	\$152	\$859	\$229
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$3,027	\$2,255	\$4,735	\$3,761
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,027	\$2,255	\$4,735	\$3,761
Total Revenue Per Year (\$000s)					\$36.3	\$27.1	\$56.8	\$45.1
Rider Adjustment (\$000s/Yr)						(\$9.2)		(\$11.7)

Hawaiian Electric Company, Inc.
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Rider Mb J6

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		106.6		106.6				
Billing kW	215.0	135.0	231.5	151.5				
kWh Per Month	40,620	40,620	40,620	40,620				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	90	90	90	90				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	40,620	27,000	40,620	30,300	\$3,530	\$2,346	\$5,541	\$4,133
201 - 400 kWh/kW	0	13,620	0	10,320	\$0	\$1,027	\$0	\$1,289
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	40,620	40,620	40,620	40,620	\$3,530	\$3,373	\$5,541	\$5,422
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	215.0	135.0	231.5	151.5	\$1,236	\$776	\$1,968	\$1,288
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$24)	(\$21)	(\$38)	(\$34)
Total Base Revenue Per Month					\$4,802	\$4,198	\$7,541	\$6,756
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$4,802	\$4,198	\$7,541	\$6,756
Total Revenue Per Year (\$000s)					\$57.6	\$50.4	\$90.5	\$81.1
Rider Adjustment (\$000s/Yr)						(\$7.2)		(\$9.4)

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Rider Mb J7

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J4	Rider M(b)	Sch. J4	Rider M(b)	Sch. J4	Rider M(b)	Sch. J4	Rider M(b)
Billing Load Per Month:								
Curtailable Load		110.4		110.4				
Billing kW	532.8	450.0	573.7	490.9				
kWh Per Month	177,433	177,433	177,433	177,433				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	99	99	99	99				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	106,560	90,000	114,740	98,180	\$9,260	\$7,821	\$15,651	\$13,392
201 - 400 kWh/kW	70,873	87,433	62,693	79,253	\$5,345	\$6,594	\$7,832	\$9,900
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	177,433	177,433	177,433	177,433	\$14,605	\$14,415	\$23,483	\$23,292
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	532.8	450.0	573.7	490.9	\$3,064	\$2,588	\$4,876	\$4,173
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					(\$124)	(\$119)	(\$170)	(\$165)
Power Factor Adjustment					(\$247)	(\$238)	(\$397)	(\$385)
Total Base Revenue Per Month					\$17,358	\$16,716	\$27,862	\$26,995
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$17,358	\$16,716	\$27,862	\$26,995
Total Revenue Per Year (\$000s)					\$208.3	\$200.6	\$334.3	\$323.9
Rider Adjustment (\$000s/Yr)						(\$7.7)		(\$10.4)

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Rider Mb J8

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		293.3		293.3				
Billing kW	521.8	301.8	524.2	304.2				
kWh Per Month	184,900	184,900	184,900	184,900				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	89	89	89	89				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	104,360	60,360	104,840	60,840	\$9,069	\$5,245	\$14,300	\$8,299
201 - 400 kWh/kW	80,540	60,360	80,060	60,840	\$6,074	\$4,552	\$10,001	\$7,600
>400 kWh/kW	0	64,180	0	63,220	\$0	\$4,180	\$0	\$7,247
Subtotal	184,900	184,900	184,900	184,900	\$15,143	\$13,977	\$24,301	\$23,146
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	521.8	301.8	524.2	304.2	\$3,000	\$1,735	\$4,456	\$2,586
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$73)	(\$63)	(\$115)	(\$103)
Total Base Revenue Per Month					\$18,130	\$15,719	\$28,712	\$25,709
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$18,130	\$15,719	\$28,712	\$25,709
Total Revenue Per Year (\$000s)					\$217.6	\$188.6	\$344.5	\$308.5
Rider Adjustment (\$000s/Yr)						(\$29.0)		(\$36.0)

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Rider Mb J9

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		175.6		175.6				
Billing kW	417.8	286.1	434.3	302.6				
kWh Per Month	139,380	139,380	139,380	139,380				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	89	89	89	89				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	83,560	57,220	86,860	60,520	\$7,261	\$4,972	\$11,848	\$8,255
201 - 400 kWh/kW	55,820	57,220	52,520	60,520	\$4,210	\$4,315	\$6,561	\$7,560
>400 kWh/kW	0	24,940	0	18,340	\$0	\$1,624	\$0	\$2,102
Subtotal	139,380	139,380	139,380	139,380	\$11,471	\$10,911	\$18,409	\$17,917
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	417.8	286.1	434.3	302.6	\$2,402	\$1,645	\$3,692	\$2,572
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$55)	(\$50)	(\$88)	(\$82)
Total Base Revenue Per Month					\$13,878	\$12,576	\$22,083	\$20,487
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$13,878	\$12,576	\$22,083	\$20,487
Total Revenue Per Year (\$000s)					\$166.5	\$150.9	\$265.0	\$245.8
Rider Adjustment (\$000s/Yr)						(\$15.6)		(\$19.2)

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Rider Mb J10

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		93.3		93.3				
Billing kW	180.3	110.3	190.0	120.0				
kWh Per Month	41,800	41,800	41,800	41,800				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	36,060	22,060	38,000	24,000	\$3,134	\$1,917	\$5,183	\$3,274
201 - 400 kWh/kW	5,740	19,740	3,800	17,800	\$433	\$1,489	\$475	\$2,224
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	41,800	41,800	41,800	41,800	\$3,567	\$3,406	\$5,658	\$5,498
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	180.3	110.3	190.0	120.0	\$1,037	\$634	\$1,615	\$1,020
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$4,664	\$4,110	\$7,343	\$6,598
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$4,664	\$4,110	\$7,343	\$6,598
Total Revenue Per Year (\$000s)					\$56.0	\$49.3	\$88.1	\$79.2
Rider Adjustment (\$000s/Yr)						(\$6.7)		(\$8.9)

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Rider Mb J11

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		100.0		100.0				
Billing kW	250.0	175.0	250.0	175.0				
kWh Per Month	88,000	88,000	88,000	88,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	50,000	35,000	50,000	35,000	\$4,345	\$3,042	\$6,820	\$4,774
201 - 400 kWh/kW	38,000	35,000	38,000	35,000	\$2,866	\$2,640	\$4,747	\$4,372
>400 kWh/kW	0	18,000	0	18,000	\$0	\$1,172	\$0	\$2,063
Subtotal	88,000	88,000	88,000	88,000	\$7,211	\$6,854	\$11,567	\$11,209
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	250.0	175.0	250.0	175.0	\$1,438	\$1,006	\$2,125	\$1,488
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
<hr/>								
Total Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Total Revenue Per Year (\$000s)					\$104.5	\$95.2	\$165.1	\$153.3
Rider Adjustment (\$000s/Yr)						(\$4.7)		(\$5.9)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
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Rider Mb J12

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		100.0		100.0				
Billing kW	250.0	175.0	250.0	175.0				
kWh Per Month	88,000	88,000	88,000	88,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	50,000	35,000	50,000	35,000	\$4,345	\$3,042	\$6,820	\$4,774
201 - 400 kWh/kW	38,000	35,000	38,000	35,000	\$2,866	\$2,640	\$4,747	\$4,372
>400 kWh/kW	0	18,000	0	18,000	\$0	\$1,172	\$0	\$2,063
Subtotal	88,000	88,000	88,000	88,000	\$7,211	\$6,854	\$11,567	\$11,209
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	250.0	175.0	250.0	175.0	\$1,438	\$1,006	\$2,125	\$1,488
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Total Revenue Per Year (\$000s)					\$104.5	\$95.2	\$165.1	\$153.3
Rider Adjustment (\$000s/Yr)						(\$4.7)		(\$5.9)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
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Rider Mb J13

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		100.0		100.0				
Billing kW	250.0	175.0	250.0	175.0				
kWh Per Month	88,000	88,000	88,000	88,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	50,000	35,000	50,000	35,000	\$4,345	\$3,042	\$6,820	\$4,774
201 - 400 kWh/kW	38,000	35,000	38,000	35,000	\$2,866	\$2,640	\$4,747	\$4,372
>400 kWh/kW	0	18,000	0	18,000	\$0	\$1,172	\$0	\$2,063
Subtotal	88,000	88,000	88,000	88,000	\$7,211	\$6,854	\$11,567	\$11,209
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	250.0	175.0	250.0	175.0	\$1,438	\$1,006	\$2,125	\$1,488
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$8,709	\$7,930	\$13,762	\$12,777
Total Revenue Per Year (\$000s)					\$104.5	\$95.2	\$165.1	\$153.3
Rider Adjustment (\$000s/Yr)						(\$4.7)		(\$5.9)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
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Rider Mb J14

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:								
Curtailable Load		370.3		370.3				
Billing kW	370.3	92.6	370.3	92.6				
kWh Per Month	188,349	188,349	188,349	188,349				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	00	00	00	00				
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Hawaiian Electric Company, Inc.
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Rider Mb J15

<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:							
Curtailable Load	50.0		50.0				
Billing kW	85.5	48.0	85.5	48.0			
kWh Per Month	46,717	46,717	46,717	46,717			
On-Peak kWh		0		0			
Off-Peak kWh		0		0			
Power Factor	85	85	85	85			
<u>Energy Charge:</u>							
0 - 200 kWh/kW	17,100	9,600	17,100	9,600	\$1,486	\$834	\$2,332
201 - 400 kWh/kW	17,100	9,600	17,100	9,600	\$1,290	\$724	\$2,136
>400 kWh/kW	12,517	27,517	12,517	27,517	\$815	\$1,792	\$1,435
Subtotal	46,717	46,717	46,717	46,717	\$3,591	\$3,350	\$5,903
On-Peak Surcharge		0		0		\$0	\$0
Off-Peak Credit		0		0		\$0	\$0
Rider T Energy Charge Adjustment		0		0		\$0	\$0
<u>Demand Charge:</u>							
Total kWb	85.5	48.0	85.5	48.0	\$492	\$276	\$727
Customer Charge					\$60	\$60	\$70
Time-of-Day Metering Charge						\$10	\$10
Primary Voltage Service Discount					\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0
Total Base Revenue Per Month					\$4,143	\$3,696	\$6,700
Fuel Oil Adjustment					\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0
Total Revenue Per Month					\$4,143	\$3,696	\$6,700
Total Revenue Per Year (\$000s)					\$49.7	\$44.4	\$80.4
Rider Adjustment (\$000s/Yr)						(\$2.7)	(\$3.3)

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Hawaiian Electric Company, Inc.
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Rider Mb J16

<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
Sch. J3	Rider M(b)	Sch. J	Rider M(b)	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)
Billing Load Per Month:							
Curtailable Load	50.0		50.0				
Billing kW	113.3		113.3				
kWh Per Month	46,231		46,231				
On-Peak kWh	0		0				
Off-Peak kWh	0		0				
Power Factor	85		85				
<u>Energy Charge:</u>							
0 - 200 kWh/kW	22,660	15,160	22,660	15,160	\$1,969	\$1,317	\$3,091
201 - 400 kWh/kW	22,660	15,160	22,660	15,160	\$1,709	\$1,143	\$2,831
>400 kWh/kW	911	15,911	911	15,911	\$59	\$1,036	\$104
Subtotal	46,231	46,231	46,231	46,231	\$3,737	\$3,496	\$6,026
On-Peak Surcharge		0		0		\$0	\$0
Off-Peak Credit		0		0		\$0	\$0
Rider T Energy Charge Adjustment		0		0		\$0	\$0
<u>Demand Charge:</u>							
Total kWb	113.3	75.8	113.3	75.8	\$651	\$436	\$963
Customer Charge					\$60	\$60	\$70
Time-of-Day Metering Charge						\$10	\$10
Primary Voltage Service Discount					\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0
Total Base Revenue Per Month					\$4,448	\$4,002	\$7,059
Fuel Oil Adjustment					\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0
Total Revenue Per Month					\$4,448	\$4,002	\$7,059
Total Revenue Per Year (\$000s)					\$53.4	\$48.0	\$84.7
Rider Adjustment (\$000s/Yr)						(\$2.7)	(\$3.3)

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Hawaiian Electric Company, Inc.
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Rider I J1

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J3	Rider I	Sch. J3	Rider I	Sch. J3	Rider I	Sch. J3	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	2,350.0	1,645.0	2,461.4	1,756.4	interruptible=2350			
kWh Per Month	255,000	255,000	255,000	255,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	93	93	93	93				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	255,000	255,000	255,000	255,000	\$22,160	\$22,160	\$34,782	\$34,782
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	255,000	255,000	255,000	255,000	\$22,160	\$22,160	\$34,782	\$34,782
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	2,350.0	1,645.0	2,461.4	1,756.4	\$13,513	\$9,459	\$20,922	\$14,929
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					(\$678)	(\$601)	(\$1,170)	(\$1,044)
Power Factor Adjustment					(\$285)	(\$253)	(\$446)	(\$398)
Total Base Revenue Per Month					\$34,770	\$30,825	\$54,158	\$48,339
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$34,770	\$30,825	\$54,158	\$48,339
Total Revenue Per Year (\$000s)					\$417.2	\$369.9	\$649.9	\$580.1
Rider Adjustment (\$000s/Yr)						(\$47.3)		(\$69.8)

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Hawaiian Electric Company, Inc.
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Rider I J2

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	131.2	91.8				
kWh Per Month	0	0	27,500	27,500				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	26,240	18,360	\$0	\$0	\$3,579	\$2,504
201 - 400 kWh/kW	0	0	1,260	9,140	\$0	\$0	\$157	\$1,142
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	0	0	27,500	27,500	\$0	\$0	\$3,736	\$3,646
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	131.2	91.8	\$0	\$0	\$1,115	\$780
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$4,921	\$4,496
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$4,921	\$4,496
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$59.1	\$54.0
Rider Adjustment (\$000s/Yr)						\$0.0		(\$2.6)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
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Rider I J3

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	150.0	105.0				
kWh Per Month	0	0	50,000	50,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	30,000	21,000	\$0	\$0	\$4,092	\$2,864
201 - 400 kWh/kW	0	0	20,000	21,000	\$0	\$0	\$2,498	\$2,623
>400 kWh/kW	0	0	0	8,000	\$0	\$0	\$0	\$917
Subtotal	0	0	50,000	50,000	\$0	\$0	\$6,590	\$6,404
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	150.0	105.0	\$0	\$0	\$1,275	\$893
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$7,935	\$7,367
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$7,935	\$7,367
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$95.2	\$88.4
Rider Adjustment (\$000s/Yr)						\$0.0		(\$3.4)

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Rider I J4

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	150.0	105.0				
kWh Per Month	0	0	50,000	50,000				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	30,000	21,000	\$0	\$0	\$4,092	\$2,864
201 - 400 kWh/kW	0	0	20,000	21,000	\$0	\$0	\$2,498	\$2,623
>400 kWh/kW	0	0	0	8,000	\$0	\$0	\$0	\$917
Subtotal	0	0	50,000	50,000	\$0	\$0	\$6,590	\$6,404
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	150.0	105.0	\$0	\$0	\$1,275	\$893
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$7,935	\$7,367
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$7,935	\$7,367
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$95.2	\$88.4
Rider Adjustment (\$000s/Yr)						\$0.0		(\$3.4)

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Rider I J5

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	164.8	115.4				
kWh Per Month	0	0	87,173	87,173				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	32,960	23,080	\$0	\$0	\$4,496	\$3,148
201 - 400 kWh/kW	0	0	32,960	23,080	\$0	\$0	\$4,117	\$2,883
>400 kWh/kW	0	0	21,253	41,013	\$0	\$0	\$2,436	\$4,701
Subtotal	0	0	87,173	87,173	\$0	\$0	\$11,049	\$10,732
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	164.8	115.4	\$0	\$0	\$1,401	\$981
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$12,520	\$11,783
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$12,520	\$11,783
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$150.2	\$141.4
Rider Adjustment (\$000s/Yr)						\$0.0		(\$4.4)

Hawaiian Electric Company, Inc.
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Rider I J6

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	182.8	128.0				
kWh Per Month	0	0	117,380	117,380				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	36,560	25,600	\$0	\$0	\$4,987	\$3,492
201 - 400 kWh/kW	0	0	36,560	25,600	\$0	\$0	\$4,567	\$3,198
401 - 600 kWh/kW	0	0	44,260	66,180	\$0	\$0	\$5,073	\$7,586

On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	182.8	128.0	\$0	\$0	\$1,554	\$1,088
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge					\$0	\$0	\$0	\$0
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$16,251	\$15,434
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$16,251	\$15,434
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$195.0	\$185.2
Rider Adjustment (\$000s/Yr)						\$0.0		(\$4.9)

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Rider I J7

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:								
Curtailable Load		0.0		0.0				
Billing kW	0.0	0.0	223.2	156.2				
kWh Per Month	0	0	133,526	133,526				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	0	0	88	88				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	0	0	44,640	31,240	\$0	\$0	\$6,089	\$4,261
201 - 400 kWh/kW	0	0	44,640	31,240	\$0	\$0	\$5,576	\$3,902
>400 kWh/kW	0	0	44,246	71,046	\$0	\$0	\$5,072	\$8,144
Subtotal	0	0	133,526	133,526	\$0	\$0	\$16,737	\$16,307
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	0.0	0.0	223.2	156.2	\$0	\$0	\$1,897	\$1,328
Customer Charge					\$0	\$0	\$70	\$70
Time-of-Day Metering Charge								
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	(\$56)	(\$53)
Total Base Revenue Per Month					\$0	\$0	\$18,648	\$17,652
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$18,648	\$17,652
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$223.8	\$211.8
Rider Adjustment (\$000s/Yr)						\$0.0		(\$6.0)

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Rider I J8

<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:							
Curtailable Load	0.0	0.0	0.0				
Billing kW	0.0	0.0	137.3	96.1			
kWh Per Month	0	0	72,813	72,813			
On-Peak kWh	0	0		0			
Off-Peak kWh	0	0		0			
Power Factor	0	0	85	85			
<u>Energy Charge:</u>							
0 - 200 kWh/kW	0	0	27,460	19,220	\$0	\$0	\$3,746
201 - 400 kWh/kW	0	0	27,460	19,220	\$0	\$0	\$3,430
>400 kWh/kW	0	0	17,893	34,373	\$0	\$0	\$2,051
Subtotal	0	0	72,813	72,813	\$0	\$0	\$9,227
On-Peak Surcharge		0		0		\$0	\$0
Off-Peak Credit		0		0		\$0	\$0
Rider T Energy Charge Adjustment		0		0		\$0	\$0
<u>Demand Charge:</u>							
Total kWb	0.0	0.0	137.3	96.1	\$0	\$0	\$1,167
Customer Charge					\$0	\$0	\$70
Time-of-Day Metering Charge							
Primary Voltage Service Discount					\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0
Total Base Revenue Per Month					\$0	\$0	\$10,464
Fuel Oil Adjustment					\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$10,464
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$125.6
Rider Adjustment (\$000s/Yr)						\$0.0	(\$3.7)

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Rider I J9

<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I	Sch. J	Rider I
Billing Load Per Month:							
Curtailable Load		0.0		0.0			
Billing kW	0.0	0.0	223.8	156.7			
kWh Per Month	0	0	140,480	140,480			
On-Peak kWh		0		0			
Off-Peak kWh		0		0			
Power Factor	0	0	95	95			
<u>Energy Charge:</u>							
0 - 200 kWh/kW	0	0	44,760	31,340	\$0	\$0	\$6,105
201 - 400 kWh/kW	0	0	44,760	31,340	\$0	\$0	\$5,591
>400 kWh/kW	0	0	50,960	77,800	\$0	\$0	\$5,841
Subtotal	0	0	140,480	140,480	\$0	\$0	\$17,537
On-Peak Surcharge		0		0		\$0	\$0
Off-Peak Credit		0		0		\$0	\$0
Rider T Energy Charge Adjustment		0		0		\$0	\$0
<u>Demand Charge:</u>							
Total kWb	0.0	0.0	223.8	156.7	\$0	\$0	\$1,902
Customer Charge					\$0	\$0	\$70
Time-of-Day Metering Charge							\$0
Primary Voltage Service Discount					\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	(\$194)
Total Base Revenue Per Month					\$0	\$0	\$19,315
Fuel Oil Adjustment					\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0
Total Revenue Per Month					\$0	\$0	\$19,315
Total Revenue Per Year (\$000s)					\$0.0	\$0.0	\$231.8
Rider Adjustment (\$000s/Yr)						\$0.0	(\$6.0)

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Rider T J1

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J3	Rider T	Sch. J3	Rider T	Sch. J3	Rider T	Sch. J3	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	5,763.9	5,305.2	6,263.2	5,754.9				
kWh Per Month	1,133,250	1,133,250	1,133,250	1,133,250				
On-Peak kWh		637,696		637,696				
Off-Peak kWh		495,554		495,554				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	1,133,250	1,061,040	1,133,250	1,133,250	\$98,479	\$92,204	\$154,575	\$154,575
201 - 400 kWh/kW	0	72,210	0	0	\$0	\$5,446	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	1,133,250	1,133,250	1,133,250	1,133,250	\$98,479	\$97,650	\$154,575	\$154,575
On-Peak Surcharge		637,696		637,696		\$12,754		\$12,754
Off-Peak Credit		495,554		495,554		(\$14,867)		(\$14,867)
Rider T Energy Charge Adjustment		1,133,250		1,133,250		(\$2,113)		(\$2,113)
<u>Demand Charge:</u>								
Total kWb	5,763.9	5,305.2	6,263.2	5,754.9	\$33,142	\$30,505	\$53,237	\$48,917
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					(\$2,501)	(\$2,435)	(\$4,364)	(\$4,273)
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$129,180	\$123,677	\$203,518	\$197,186
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$129,180	\$123,677	\$203,518	\$197,186
Total Revenue Per Year (\$000s)					\$1,550.2	\$1,484.1	\$2,442.2	\$2,366.2
Rider Adjustment (\$000s/Yr)						(\$66.1)		(\$76.0)

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Rider T J2

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	38.0	37.2	38.5	37.4				
kWh Per Month	2,333	2,333	2,333	2,333				
On-Peak kWh		533		533				
Off-Peak kWh		1,800		1,800				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	2,333	2,333	2,333	2,333	\$203	\$203	\$318	\$318
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	2,333	2,333	2,333	2,333	\$203	\$203	\$318	\$318
On-Peak Surcharge		533		533		\$11		\$11
Off-Peak Credit		1,800		1,800		(\$54)		(\$54)
Rider T Energy Charge Adjustment		2,333		2,333		(\$43)		(\$43)
<u>Demand Charge:</u>								
Total kWb	38.0	37.2	38.5	37.4	\$219	\$214	\$327	\$318
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$482	\$444	\$715	\$673
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$482	\$444	\$715	\$673
Total Revenue Per Year (\$000s)					\$5.8	\$5.3	\$8.6	\$8.1
Rider Adjustment (\$000s/Yr)						(\$0.5)		(\$0.5)

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Rider T J3

Billing Units @ Present Rates	Billing Units @ Proposed Rate	Revenues @ Present Rates	Revenues @ Proposed Rates
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Billing Load Per Month:

Curtailable Load				
Billing kW	116.3	110.8	116.4	111.2
kWh Per Month	41,813	41,813	41,813	41,813
On-Peak kWh		20,187		20,187
Off-Peak kWh		21,626		21,626
Power Factor	85	85	85	85

Energy Charge:

0 - 200 kWh/kW	23,260	22,160	23,280	22,240	\$2,021	\$1,926	\$3,175	\$3,034
201 - 400 kWh/kW	18,553	19,653	18,533	19,573	\$1,399	\$1,482	\$2,315	\$2,445
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	41,813	41,813	41,813	41,813	\$3,420	\$3,408	\$5,490	\$5,479

On-Peak Surcharge		20,187		20,187		\$404		\$404
Off-Peak Credit		21,626		21,626		(\$649)		(\$649)
Rider T Energy Charge Adjustment		41,813		41,813		(\$245)		(\$245)

Demand Charge:

Total kWb	116.3	110.8	116.4	111.2	\$669	\$637	\$989	\$945
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Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0

Total Base Revenue Per Month					\$4,149	\$3,870	\$6,549	\$6,259
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Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0

Total Revenue Per Month					\$4,149	\$3,870	\$6,549	\$6,259
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	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	293.5	289.7	294.4	291.7				
Fixed Fee Charge	77,942	77,942	77,942	77,942				

Power Factor	88	88	88	88				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	58,700	57,940	58,880	58,340	\$5,101	\$5,035	\$8,031	\$7,958
201 - 400 kWh/kW	18,513	19,273	18,333	18,873	\$1,396	\$1,454	\$2,290	\$2,358
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	77,213	77,213	77,213	77,213	\$6,497	\$6,489	\$10,321	\$10,316
On-Peak Surcharge		23,460		23,460		\$469		\$469
Off-Peak Credit		53,753		53,753		(\$1,613)		(\$1,613)
Rider T Energy Charge Adjustment		77,213		77,213		(\$1,144)		(\$1,144)
<u>Demand Charge:</u>								
Total kWb	293.5	289.7	294.4	291.7	\$1,688	\$1,666	\$2,502	\$2,479
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$25)	(\$24)	(\$38)	(\$38)
Total Base Revenue Per Month					\$8,220	\$7,057	\$12,855	\$11,693
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$8,220	\$7,057	\$12,855	\$11,693
Total Revenue Per Year (\$000s)					\$98.6	\$84.7	\$154.3	\$140.3

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Rider T J5

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	469.2	432.6	520.7	425.8				
kWh Per Month	119,580	119,580	119,580	119,580				
On-Peak kWh		55,540		55,540				
Off-Peak kWh		64,040		64,040				
Power Factor	84	84	84	84				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	93,840	86,520	104,140	85,160	\$8,155	\$7,519	\$14,205	\$11,616
201 - 400 kWh/kW	25,740	33,060	15,440	34,420	\$1,941	\$2,493	\$1,929	\$4,300
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	119,580	119,580	119,580	119,580	\$10,096	\$10,012	\$16,134	\$15,916
On-Peak Surcharge		55,540		55,540		\$1,111		\$1,111
Off-Peak Credit		64,040		64,040		(\$1,921)		(\$1,921)
Rider T Energy Charge Adjustment		119,580		119,580		(\$810)		(\$810)
<u>Demand Charge:</u>								
Total kWb	469.2	432.6	520.7	425.8	\$2,698	\$2,487	\$4,426	\$3,619
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$13	\$12	\$21	\$20
Total Base Revenue Per Month					\$12,867	\$11,771	\$20,651	\$18,825
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$12,867	\$11,771	\$20,651	\$18,825
Total Revenue Per Year (\$000s)					\$154.4	\$141.3	\$247.8	\$225.9
Rider Adjustment (\$000s/Yr)						(\$13.1)		(\$21.9)

Hawaiian Electric Company, Inc.
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Rider T J6

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtable Load								
Billing kW	213.9	210.2	221.8	218.6				
kWh Per Month	39,687	39,687	39,687	39,687				
On-Peak kWh		15,607		15,607				
Off-Peak kWh		24,080		24,080				
Power Factor	88	88	88	88				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	39,687	39,687	39,687	39,687	\$3,449	\$3,449	\$5,413	\$5,413
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	39,687	39,687	39,687	39,687	\$3,449	\$3,449	\$5,413	\$5,413
On-Peak Surcharge		15,607		15,607		\$312		\$312
Off-Peak Credit		24,080		24,080		(\$722)		(\$722)
Rider T Energy Charge Adjustment		39,687		39,687		(\$410)		(\$410)
<u>Demand Charge:</u>								
Total kWb	213.9	210.2	221.8	218.6	\$1,230	\$1,209	\$1,885	\$1,858
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$14)	(\$14)	(\$22)	(\$22)
Total Base Revenue Per Month					\$4,725	\$4,304	\$7,346	\$6,919
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
<hr/>								
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$4,725	\$4,304	\$7,346	\$6,919
Total Revenue Per Year (\$000s)					\$56.7	\$51.6	\$88.2	\$83.0
Rider Adjustment (\$000s/Yr)						(\$5.1)		(\$5.2)

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Rider T J7

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	539.1	25.0	359.4	25.0				
kWh Per Month	1,000	1,000	1,000	1,000				
On-Peak kWh		400		400				
Off-Peak kWh		600		600				
Power Factor	100	100	100	100				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	1,000	1,000	1,000	1,000	\$87	\$87	\$136	\$136
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	1,000	1,000	1,000	1,000	\$87	\$87	\$136	\$136
On-Peak Surcharge		400		400		\$8		\$8
Off-Peak Credit		600		600		(\$18)		(\$18)
Rider T Energy Charge Adjustment		1,000		1,000		(\$10)		(\$10)
<u>Demand Charge:</u>								
Total kWb	539.1	25.0	359.4	25.0	\$3,100	\$144	\$3,055	\$213
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$48)	(\$3)	(\$48)	(\$5)
Total Base Revenue Per Month					\$3,199	\$288	\$3,213	\$414
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,199	\$288	\$3,213	\$414
Total Revenue Per Year (\$000s)					\$38.4	\$3.5	\$38.6	\$5.0
Rider Adjustment (\$000s/Yr)						(\$34.9)		(\$33.6)

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Rider T J8

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	598.8	25.0	399.2	25.0				
kWh Per Month	533	533	533	533				
On-Peak kWh		267		267				
Off-Peak kWh		266		266				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	533	533	533	533	\$46	\$46	\$73	\$73
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	533	533	533	533	\$46	\$46	\$73	\$73
On-Peak Surcharge		267		267		\$5		\$5
Off-Peak Credit		266		266		(\$8)		(\$8)
Rider T Energy Charge Adjustment		533		533		(\$3)		(\$3)
<u>Demand Charge:</u>								
Total kWb	598.8	25.0	399.2	25.0	\$3,443	\$144	\$3,393	\$213
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$3,549	\$257	\$3,536	\$363
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,549	\$257	\$3,536	\$363
Total Revenue Per Year (\$000s)					\$42.6	\$3.1	\$42.4	\$4.4
Rider Adjustment (\$000s/Yr)						(\$39.5)		(\$38.0)

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Rider T J9

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtable Load								
Billing kW	132.0	130.0	133.4	131.4				
kWh Per Month	20,967	20,967	20,967	20,967				
On-Peak kWh		7,620		7,620				
Off-Peak kWh		13,347		13,347				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	20,967	20,967	20,967	20,967	\$1,822	\$1,822	\$2,860	\$2,860
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	20,967	20,967	20,967	20,967	\$1,822	\$1,822	\$2,860	\$2,860
On-Peak Surcharge		7,620		7,620		\$152		\$152
Off-Peak Credit		13,347		13,347		(\$400)		(\$400)
Rider T Energy Charge Adjustment		20,967		20,967		(\$248)		(\$248)
<u>Demand Charge:</u>								
Total kWb	132.0	130.0	133.4	131.4	\$759	\$748	\$1,134	\$1,117
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$2,641	\$2,392	\$4,064	\$3,809
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$2,641	\$2,392	\$4,064	\$3,809
Total Revenue Per Year (\$000s)					\$31.7	\$28.7	\$48.8	\$45.7
Rider Adjustment (\$000s/Yr)						(\$3.0)		(\$3.1)

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Rider T J10

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	199.1	144.6	206.5	161.5				
kWh Per Month	21,333	21,333	21,333	21,333				
On-Peak kWh		5,747		5,747				
Off-Peak kWh		15,586		15,586				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	21,333	21,333	21,333	21,333	\$1,854	\$1,854	\$2,910	\$2,910
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	21,333	21,333	21,333	21,333	\$1,854	\$1,854	\$2,910	\$2,910
On-Peak Surcharge		5,747		5,747		\$115		\$115
Off-Peak Credit		15,586		15,586		(\$468)		(\$468)
Rider T Energy Charge Adjustment		21,333		21,333		(\$353)		(\$353)
<u>Demand Charge:</u>								
Total kWb	199.1	144.6	206.5	161.5	\$1,145	\$831	\$1,755	\$1,373
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$3,059	\$2,402	\$4,735	\$4,010
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,059	\$2,402	\$4,735	\$4,010
Total Revenue Per Year (\$000s)					\$36.7	\$28.8	\$56.8	\$48.1
Rider Adjustment (\$000s/Yr)						(\$7.9)		(\$8.7)

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Rider T J11

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	37.4	37.4	38.3	38.3				
Watts Per Month	17,673	17,673	17,673	17,673				
<hr/>								
<hr/>								
On-Peak kWh		8,813		8,813				
Off-Peak kWh		8,860		8,860				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	7,480	7,480	7,660	7,660	\$650	\$650	\$1,045	\$1,045
201 - 400 kWh/kW	7,480	7,480	7,660	7,660	\$564	\$564	\$957	\$957
>400 kWh/kW	2,713	2,713	2,353	2,353	\$177	\$177	\$270	\$270
Subtotal	17,673	17,673	17,673	17,673	\$1,391	\$1,391	\$2,272	\$2,272
On-Peak Surcharge		8,813		8,813		\$176		\$176
Off-Peak Credit		8,860		8,860		(\$266)		(\$266)
Rider T Energy Charge Adjustment		17,673		17,673		(\$90)		(\$90)
<u>Demand Charge:</u>								
Total kWb	37.4	37.4	38.3	38.3	\$215	\$215	\$326	\$326
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$1,666	\$1,586	\$2,668	\$2,588
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$1,666	\$1,586	\$2,668	\$2,588
Total Revenue Per Year (\$000s)					\$20.0	\$19.0	\$32.0	\$31.1
Rider Adjustment (\$000s/Yr)						(\$1.0)		(\$0.9)

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Rider T J12

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	69.8	69.8	71.0	71.0				
kWh Per Month	27,213	27,213	27,213	27,213				
On-Peak kWh		15,227		15,227				
Off-Peak kWh		11,986		11,986				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	13,960	13,960	14,200	14,200	\$1,213	\$1,213	\$1,937	\$1,937
201 - 400 kWh/kW	13,253	13,253	13,013	13,013	\$1,000	\$1,000	\$1,626	\$1,626
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	27,213	27,213	27,213	27,213	\$2,213	\$2,213	\$3,563	\$3,563
On-Peak Surcharge		15,227		15,227		\$305		\$305
Off-Peak Credit		11,986		11,986		(\$360)		(\$360)
Rider T Energy Charge Adjustment		27,213		27,213		(\$55)		(\$55)
<u>Demand Charge:</u>								
Total kWb	69.8	69.8	71.0	71.0	\$401	\$401	\$604	\$604
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$2,674	\$2,629	\$4,237	\$4,192
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$2,674	\$2,629	\$4,237	\$4,192
Total Revenue Per Year (\$000s)					\$32.1	\$31.5	\$50.8	\$50.3
Rider Adjustment (\$000s/Yr)						(\$0.6)		(\$0.5)

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Rider T J13

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	76.4	27.3	79.3	27.3				
kWh Per Month	10,737	10,737	10,737	10,737				
On-Peak kWh		3,581		3,581				
Off-Peak kWh		7,156		7,156				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	10,737	5,460	10,737	5,460	\$933	\$474	\$1,465	\$745
201 - 400 kWh/kW	0	5,277	0	5,277	\$0	\$398	\$0	\$659
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	10,737	10,737	10,737	10,737	\$933	\$872	\$1,465	\$1,404
On-Peak Surcharge		3,581		3,581		\$72		\$72
Off-Peak Credit		7,156		7,156		(\$215)		(\$215)
Rider T Energy Charge Adjustment		10,737		10,737		(\$143)		(\$143)
<u>Demand Charge:</u>								
Total kWb	76.4	27.3	79.3	27.3	\$439	\$157	\$674	\$232
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$1,432	\$956	\$2,209	\$1,573
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$1,432	\$956	\$2,209	\$1,573
Total Revenue Per Year (\$000s)					\$17.2	\$11.5	\$26.5	\$18.9
Rider Adjustment (\$000s/Yr)						(\$5.7)		(\$7.6)

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Rider T J14

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtaillable Load								
Billing kW	69.0	25.0	74.3	25.0				
kWh Per Month	9,427	9,427	9,427	9,427				
On-Peak kWh		2,580		2,580				
		<u>6,847</u>		<u>6,847</u>				
<hr/>								
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	9,427	5,000	9,427	5,000	\$819	\$435	\$1,286	\$682
201 - 400 kWh/kW	0	4,427	0	4,427	\$0	\$334	\$0	\$553
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	<u>9,427</u>	<u>9,427</u>	<u>9,427</u>	<u>9,427</u>	<u>\$819</u>	<u>\$769</u>	<u>\$1,286</u>	<u>\$1,235</u>
On-Peak Surcharge		2,580		2,580		\$52		\$52
Off-Peak Credit		<u>6,847</u>		<u>6,847</u>		<u>(\$205)</u>		<u>(\$205)</u>
Rider T Energy Charge Adjustment		9,427		9,427		<u>(\$153)</u>		<u>(\$153)</u>
<u>Demand Charge:</u>								
Total kWb	69.0	25.0	74.3	25.0	\$397	\$144	\$632	\$213
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					<u>\$1,276</u>	<u>\$830</u>	<u>\$1,988</u>	<u>\$1,375</u>
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Revenue Per Month					<u>\$1,276</u>	<u>\$830</u>	<u>\$1,988</u>	<u>\$1,375</u>
Total Revenue Per Year (\$000s)					\$15.3	\$10.0	\$23.9	\$16.5
Rider Adjustment (\$000s/Yr)						<u>(\$5.3)</u>		<u>(\$7.4)</u>

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Rider T J15

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	199.5	128.4	201.9	131.7				
kWh Per Month	21,347	21,347	21,347	21,347				
On-Peak kWh		6,100		6,100				
Off-Peak kWh		15,247		15,247				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	21,347	21,347	21,347	21,347	\$1,855	\$1,855	\$2,912	\$2,912
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	21,347	21,347	21,347	21,347	\$1,855	\$1,855	\$2,912	\$2,912
On-Peak Surcharge		6,100		6,100		\$122		\$122
		15,247		15,247		(\$457)		(\$457)

<u>Demand Charge:</u>								
Total kWb	199.5	128.4	201.9	131.7	\$1,147	\$738	\$1,716	\$1,119
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$3,062	\$2,328	\$4,698	\$3,776
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0

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Rider T J16

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	247.7	25.0	259.8	25.0				
kWh Per Month	60,547	60,547	60,547	60,547				
On-Peak kWh		633		633				
Off-Peak kWh		59,914		59,914				
Power Factor	83	83	83	83				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	49,540	5,000	51,960	5,000	\$4,305	\$435	\$7,087	\$682
201 - 400 kWh/kW	11,007	5,000	8,587	5,000	\$830	\$377	\$1,073	\$625
>400 kWh/kW	0	50,547	0	50,547	\$0	\$3,292	\$0	\$5,794
Subtotal	60,547	60,547	60,547	60,547	\$5,135	\$4,104	\$8,160	\$7,101
On-Peak Surcharge		633		633		\$13		\$13
Off-Peak Credit		59,914		59,914		(\$1,797)		(\$1,797)
Rider T Energy Charge Adjustment		60,547		60,547		(\$1,784)		(\$1,784)
<u>Demand Charge:</u>								
Total kWb	247.7	25.0	259.8	25.0	\$1,424	\$144	\$2,208	\$213
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$13	\$8	\$21	\$15
Total Base Revenue Per Month					\$6,632	\$2,542	\$10,459	\$5,625
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$6,632	\$2,542	\$10,459	\$5,625
Total Revenue Per Year (\$000s)					\$79.6	\$30.5	\$125.5	\$67.5
Rider Adjustment (\$000s/Yr)						(\$49.1)		(\$58.0)

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Rider T J17

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	219.6	25.0	230.9	25.0				
kWh Per Month	37,213	37,213	37,213	37,213				
On-Peak kWh		540		540				
Off-Peak kWh		36,673		36,673				
Power Factor	83	83	83	83				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	37,213	5,000	37,213	5,000	\$3,234	\$435	\$5,076	\$682
201 - 400 kWh/kW	0	5,000	0	5,000	\$0	\$377	\$0	\$625
>400 kWh/kW	0	27,213	0	27,213	\$0	\$1,772	\$0	\$3,119
Subtotal	37,213	37,213	37,213	37,213	\$3,234	\$2,584	\$5,076	\$4,426
On-Peak Surcharge		540		540		\$11		\$11
Off-Peak Credit		36,673		36,673		(\$1,100)		(\$1,100)
Rider T Energy Charge Adjustment		37,213		37,213		(\$1,089)		(\$1,089)
<u>Demand Charge:</u>								
Total kWb	219.6	25.0	230.9	25.0	\$1,263	\$144	\$1,963	\$213
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$9	\$5	\$14	\$9
Total Base Revenue Per Month					\$4,566	\$1,714	\$7,123	\$3,639
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$4,566	\$1,714	\$7,123	\$3,639
Total Revenue Per Year (\$000s)					\$54.8	\$20.6	\$85.5	\$43.7
Rider Adjustment (\$000s/Yr)						(\$34.2)		(\$41.8)

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Rider T J18

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	222.0	26.1	234.4	25.0				
kWh Per Month	23,920	23,920	23,920	23,920				
On-Peak kWh		0		0				
Off-Peak kWh		23,920		23,920				
Power Factor	88	88	88	88				

Energy Charge:

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Rider T J19

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	175.4	28.1	184.8	31.2				
kWh Per Month	31,840	31,840	31,840	31,840				
On-Peak kWh		5,800		5,800				
Off-Peak kWh		26,040		26,040				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	31,840	5,620	31,840	6,240	\$2,767	\$488	\$4,343	\$851
201 - 400 kWh/kW	0	5,620	0	6,240	\$0	\$424	\$0	\$779
>400 kWh/kW	0	20,600	0	19,360	\$0	\$1,342	\$0	\$2,219
Subtotal	31,840	31,840	31,840	31,840	\$2,767	\$2,254	\$4,343	\$3,849
On-Peak Surcharge		5,800		5,800		\$116		\$116
Off-Peak Credit		26,040		26,040		(\$781)		(\$781)
Rider T Energy Charge Adjustment		31,840		31,840		(\$665)		(\$665)
<u>Demand Charge:</u>								
Total kWb	175.4	28.1	184.8	31.2	\$1,009	\$162	\$1,571	\$265
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$3,836	\$1,821	\$5,984	\$3,529
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,836	\$1,821	\$5,984	\$3,529
Total Revenue Per Year (\$000s)					\$46.0	\$21.9	\$71.8	\$42.3
Rider Adjustment (\$000s/Yr)						(\$24.1)		(\$29.5)

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Rider T J20

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	34.4	34.4	34.9	34.9				
kWh Per Month	15,387	15,387	15,387	15,387				
On-Peak kWh		7,047		7,047				
Off-Peak kWh		8,340		8,340				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	6,880	6,880	6,980	6,980	\$598	\$598	\$952	\$952
201 - 400 kWh/kW	6,880	6,880	6,980	6,980	\$519	\$519	\$872	\$872
>400 kWh/kW	1,627	1,627	1,427	1,427	\$106	\$106	\$164	\$164
Subtotal	15,387	15,387	15,387	15,387	\$1,223	\$1,223	\$1,988	\$1,988
On-Peak Surcharge		7,047		7,047		\$141		\$141
Off-Peak Credit		8,340		8,340		(\$250)		(\$250)
Rider T Energy Charge Adjustment		15,387		15,387		(\$109)		(\$109)
<u>Demand Charge:</u>								
Total kWb	34.4	34.4	34.9	34.9	\$198	\$198	\$297	\$297
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$1,481	\$1,382	\$2,355	\$2,256
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$1,481	\$1,382	\$2,355	\$2,256
Total Revenue Per Year (\$000s)					\$17.8	\$16.6	\$28.3	\$27.1
Rider Adjustment (\$000s/Yr)						(\$1.2)		(\$1.2)

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Rider T J21

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	40.0	39.8	41.7	41.6				
kWh Per Month	21,293	21,293	21,293	21,293				
On-Peak kWh		11,340		11,340				
Off-Peak kWh		9,953		9,953				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	8,000	7,960	8,340	8,320	\$695	\$692	\$1,138	\$1,135
201 - 400 kWh/kW	8,000	7,960	8,340	8,320	\$603	\$600	\$1,042	\$1,039
>400 kWh/kW	5,293	5,373	4,613	4,653	\$345	\$350	\$529	\$533

On-Peak Surcharge		11,340		11,340		\$227		\$227
Off-Peak Credit		9,953		9,953		(\$299)		(\$299)
Rider T Energy Charge Adjustment		21,293		21,293		(\$72)		(\$72)
<u>Demand Charge:</u>								
Total kWb	40.0	39.8	41.7	41.6	\$230	\$229	\$354	\$354
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$1,933	\$1,869	\$3,133	\$3,069
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$1,933	\$1,869	\$3,133	\$3,069
Total Revenue Per Year (\$000s)					\$23.2	\$22.4	\$37.6	\$36.8

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Rider T J22

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	130.0	129.3	144.4	140.0				
kWh Per Month	21,187	21,187	21,187	21,187				
On-Peak kWh		8,573		8,573				
Off-Peak kWh		12,614		12,614				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	21,187	21,187	21,187	21,187	\$1,841	\$1,841	\$2,890	\$2,890
201 - 400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	21,187	21,187	21,187	21,187	\$1,841	\$1,841	\$2,890	\$2,890
On-Peak Surcharge		8,573		8,573		\$171		\$171
Off-Peak Credit		12,614		12,614		(\$378)		(\$378)
Rider T Energy Charge Adjustment		21,187		21,187		(\$207)		(\$207)
<u>Demand Charge:</u>								
Total kWb	130.0	129.3	144.4	140.0	\$748	\$743	\$1,227	\$1,190
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$2,649	\$2,447	\$4,187	\$3,953
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$2,649	\$2,447	\$4,187	\$3,953
Total Revenue Per Year (\$000s)					\$31.8	\$29.4	\$50.2	\$47.4
Rider Adjustment (\$000s/Yr)						(\$2.4)		(\$2.8)

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Rider T J23

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	37.0	36.9	37.4	37.3				
kWh Per Month	16,717	16,717	16,717	16,717				
On-Peak kWh		6,753		6,753				
Off-Peak kWh		9,964		9,964				
Power Factor	85	85	85	85				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	7,400	7,380	7,480	7,480	\$643	\$641	\$1,020	\$1,018
201 - 400 kWh/kW	7,400	7,380	7,480	7,480	\$558	\$557	\$934	\$932
>400 kWh/kW	1,917	1,957	1,757	1,797	\$125	\$127	\$201	\$206
Subtotal	16,717	16,717	16,717	16,717	\$1,326	\$1,325	\$2,155	\$2,156
On-Peak Surcharge		6,753		6,753		\$135		\$135
Off-Peak Credit		9,964		9,964		(\$299)		(\$299)
Rider T Energy Charge Adjustment		16,717		16,717		(\$164)		(\$164)
<u>Demand Charge:</u>								
Total kWb	37.0	36.9	37.4	37.3	\$213	\$212	\$318	\$317
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					\$0	\$0	\$0	\$0
Total Base Revenue Per Month					\$1,599	\$1,443	\$2,543	\$2,389
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$1,599	\$1,443	\$2,543	\$2,389
Total Revenue Per Year (\$000s)					\$19.2	\$17.3	\$30.5	\$28.7
Rider Adjustment (\$000s/Yr)						(\$1.9)		(\$1.8)

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Rider T J24

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:								
Curtailable Load								
Billing kW	281.2	48.9	293.3	52.1				
kWh Per Month	63,174	63,174	63,174	63,174				
On-Peak kWh		17,767		17,767				
Off-Peak kWh		45,407		45,407				
Power Factor	87	87	87	87				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	56,240	9,780	58,660	10,420	\$4,887	\$850	\$8,001	\$1,421
201 - 400 kWh/kW	6,934	9,780	4,514	10,420	\$523	\$738	\$564	\$1,302
>400 kWh/kW	0	43,614	0	42,334	\$0	\$2,841	\$0	\$4,853
Subtotal	63,174	63,174	63,174	63,174	\$5,410	\$4,429	\$8,565	\$7,576
On-Peak Surcharge		17,767		17,767		\$355		\$355
Off-Peak Credit		45,407		45,407		(\$1,362)		(\$1,362)

<u>Demand Charge:</u>								
Total kWb	281.2	48.9	293.3	52.1	\$1,617	\$281	\$2,493	\$443
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$14)	(\$9)	(\$22)	(\$16)
Total Base Revenue Per Month					\$7,073	\$3,764	\$11,106	\$7,076
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$7,073	\$3,764	\$11,106	\$7,076

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Rider Mbl J1

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J3	Riders M(b)&I	Sch. J3	Riders M(b)&I	Sch. J3	Riders M(b)&I	Sch. J3	Riders M(b)&I
Billing Load Per Month:								
Curtailable Load								
Billing kW	3,613.8	447.8	3,772.2	606.2				
kWh Per Month	152,600	152,600	152,600	152,600				
On-Peak kWh		0		0				
Off-Peak kWh		0		0				
Power Factor	62	62	62	62				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	152,600	89,560	152,600	121,240	\$13,261	\$7,783	\$20,815	\$16,537
201 - 400 kWh/kW	0	63,040	0	31,360	\$0	\$4,754	\$0	\$3,917
>400 kWh/kW	0	0	0	0	\$0	\$0	\$0	\$0
Subtotal	152,600	152,600	152,600	152,600	\$13,261	\$12,537	\$20,815	\$20,454
On-Peak Surcharge		0		0		\$0		\$0
Off-Peak Credit		0		0		\$0		\$0
Rider T Energy Charge Adjustment		0		0		\$0		\$0
<u>Demand Charge:</u>								
Total kWb	3,613.8	447.8	3,772.2	606.2	\$20,779	\$2,575	\$32,064	\$5,153
Customer Charge					\$60	\$60	\$70	\$70
Time-of-Day Metering Charge						\$10		\$10
Primary Voltage Service Discount					(\$647)	(\$287)	(\$1,110)	(\$538)
Power Factor Adjustment					\$783	\$348	\$1,218	\$589
Total Base Revenue Per Month					\$34,236	\$15,243	\$53,055	\$25,738
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$34,236	\$15,243	\$53,055	\$25,738
Total Revenue Per Year (\$000s)					\$410.8	\$182.9	\$636.7	\$308.9
Rider Adjustment (\$000s/Yr)						(\$227.9)		(\$327.8)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Sch U J1

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U
Billing Load Per Month:								
Curtailable Load								
Billing kW	592.7	37.3	592.7	37.3				
kWh Per Month	126,693	126,693	126,693	126,693				
On-Peak kWh		333		333				
Off-Peak kWh		126,360		126,360				
Power Factor	91	91	91	91				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	118,540		118,540		\$10,301		\$16,169	
201 - 400 kWh/kW	8,153		8,153		\$615		\$1,018	
>400 kWh/kW	0		0		\$0		\$0	
Subtotal	126,693		126,693		\$10,916		\$17,187	
On-Peak kWh		333		333		\$26		\$45
Off-Peak kWh		126,360		126,360		\$3,791		\$12,636
Rider U Energy Charge		126,693		126,693		\$3,817		\$12,681
<u>Demand Charge:</u>								
Total kWb	592.7	37.3	592.7	37.3	\$3,408	\$634	\$5,038	\$671
Customer Charge					\$60	\$215	\$70	\$350
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$86)	(\$27)	(\$133)	(\$80)
Total Base Revenue Per Month					\$14,298	\$4,639	\$22,162	\$13,622
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$14,298	\$4,639	\$22,162	\$13,622
Total Revenue Per Year (\$000s)					\$171.6	\$55.7	\$265.9	\$163.5
Rider Adjustment (\$000s/Yr)						(\$115.9)		(\$102.4)

Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Sch U J2

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U
Billing Load Per Month:								
Curtailable Load								
Billing kW	288.0	38.4	288.0	38.4				
kWh Per Month	25,560	25,560	25,560	25,560				
On-Peak kWh		2,813		2,813				
Off-Peak kWh		22,747		22,747				
Power Factor	90	90	90	90				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	25,560		25,560		\$2,221		\$3,486	
201 - 400 kWh/kW	0		0		\$0		\$0	
>400 kWh/kW	0		0		\$0		\$0	
Subtotal	25,560		25,560		\$2,221		\$3,486	
On-Peak kWh		2,813		2,813		\$220		\$378
Off-Peak kWh		22,747		22,747		\$682		\$2,275
Rider U Energy Charge		25,560		25,560		\$902		\$2,653
<u>Demand Charge:</u>								
Total kWb	288.0	38.4	288.0	38.4	\$1,656	\$653	\$2,448	\$691
Customer Charge					\$60	\$215	\$70	\$350
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$19)	(\$8)	(\$30)	(\$17)
Total Base Revenue Per Month					\$3,918	\$1,762	\$5,974	\$3,677
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$3,918	\$1,762	\$5,974	\$3,677
Total Revenue Per Year (\$000s)					\$47.0	\$21.1	\$71.7	\$44.1
Rider Adjustment (\$000s/Yr)						(\$25.9)		(\$27.6)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Sch U J3

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U
Billing Load Per Month:								
Curtailable Load								
Billing kW	367.5	33.1	367.5	33.1				
kWh Per Month	93,160	93,160	93,160	93,160				
On-Peak kWh		240		240				
Off-Peak kWh		92,920		92,920				
Power Factor	96	96	96	96				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	73,500		73,500		\$6,387		\$10,025	
201 - 400 kWh/kW	19,660		19,660		\$1,483		\$2,456	
>400 kWh/kW	0		0		\$0		\$0	
Subtotal	93,160		93,160		\$7,870		\$12,481	
On-Peak kWh		240		240		\$19		\$32
Off-Peak kWh		92,920		92,920		\$2,788		\$9,292
Rider U Energy Charge		93,160		93,160		\$2,807		\$9,324
<u>Demand Charge:</u>								
Total kWb	367.5	33.1	367.5	33.1	\$2,113	\$563	\$3,124	\$596
Customer Charge					\$60	\$215	\$70	\$350
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$110)	(\$37)	(\$172)	(\$109)
Total Base Revenue Per Month					\$9,933	\$3,548	\$15,503	\$10,161
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$9,933	\$3,548	\$15,503	\$10,161
Total Revenue Per Year (\$000s)					\$119.2	\$42.6	\$186.0	\$121.9
Rider Adjustment (\$000s/Yr)						(\$76.8)		(\$64.1)

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Hawaiian Electric Company, Inc.
Schedule J - General Service Demand
Based On Docket No. 04-0113 Test Year: 2005

Sch U J4

	<u>Billing Units @ Present Rates</u>		<u>Billing Units @ Proposed Rate</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U	Sch. J	Sch. U
Billing Load Per Month:								
Curtailable Load								
Billing kW	601.1	25.0	601.1	25.0				
kWh Per Month	130,440	130,440	130,440	130,440				
On-Peak kWh		240		240				
Off-Peak kWh		130,200		130,200				
Power Factor	94	94	94	94				
<u>Energy Charge:</u>								
0 - 200 kWh/kW	120,220		120,220		\$10,447		\$16,398	
201 - 400 kWh/kW	10,220		10,220		\$771		\$1,277	
>400 kWh/kW	0		0		\$0		\$0	
Subtotal	130,440		130,440		\$11,218		\$17,675	
On-Peak kWh		240		240		\$19		\$32
Off-Peak kWh		130,200		130,200		\$3,906		\$13,020
Rider U Energy Charge		130,440		130,440		\$3,925		\$13,052
<u>Demand Charge:</u>								
Total kWb	601.1	25.0	601.1	25.0	\$3,456	\$425	\$5,109	\$450
Customer Charge					\$60	\$215	\$70	\$350
Primary Voltage Service Discount					\$0	\$0	\$0	\$0
Power Factor Adjustment					(\$132)	(\$39)	(\$205)	(\$122)
Total Base Revenue Per Month					\$14,602	\$4,526	\$22,649	\$13,730
Fuel Oil Adjustment					\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)					\$0	\$0	\$0	\$0
IRP Adjustment					\$0	\$0	\$0	\$0
DSM Adjustment					\$0	\$0	\$0	\$0
Total Revenue Per Month					\$14,602	\$4,526	\$22,649	\$13,730
Total Revenue Per Year (\$000s)					\$175.2	\$54.3	\$271.8	\$164.8
Rider Adjustment (\$000s/Yr)						(\$120.9)		(\$107.0)

Hawaiian Electric Company, Inc.
Derivation of Proposed TOU-C Revenue Adjustment for Schedule J
(Sorted by % Increase)

ID No.	Annual Base Bill		Annual \$ Diff	% Increase	Cumulative \$ Diff	Revenue Loss Per Customer
	Proposed Sch J	Proposed Sch J-TOU				
[1]	[2]	[3]	[4]=[3]-[2]	[5]=[4]/[2]	[6]=[4]+Prev.[6]	[7]=[6]/[1]
1	\$47,993.05	\$44,310.93	-\$3,682.12	-7.7%	-\$3,682.12	-\$3,682.12
2	\$38,738.92	\$38,170.45	-\$568.47	-1.5%	-\$4,250.59	-\$2,125.30
3	\$10,848.33	\$10,709.77	-\$138.56	-1.3%	-\$4,389.15	-\$1,463.05

<u>Estimate of TOU-C Demand Customer Revenue Adjustment</u>	
Revenue Loss Per Customer	-\$1,463.05
Test Year Estimate of Participants	50
Estimated Revenue adjustment	<u><u>-\$73,152.50</u></u>

Notes:

Proposed Sch J Billing Parameters

Customer 1-Phase	\$50.00
Customer 3-Phase	\$70.00
Demand Charge	\$8.50
Energy Charge 0-200	\$0.136400
Energy Charge 200-400	\$0.124919
Energy Charge > 400	\$0.114629

Proposed Sch J-TOU Billing Parameters

Customer 1-Phase	\$50.00
Customer 3-Phase	\$70.00
Demand - Priority	\$15.00
Demand - Mid Peak	\$8.50
Demand - Off-Peak	\$0.00
Energy - Priority	\$0.180944
Energy - Mid Peak	\$0.150944
Energy - Off-Peak	\$0.100000

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE H - COMMERCIAL COOKING, HEATING, AIR
CONDITIONING AND REFRIGERATION SERVICE

DETERMINATION OF TEST-YEAR BILLING LOADS

	<u>NO. OF BILLS</u>		<u>MWH SALES</u>	
	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>	<u>PERCENT OF TOTAL</u>
<u>RECORDED:</u>				
RATE H:	<u>14,547</u>	<u>100.0</u>	<u>61,652</u>	<u>100.0</u>
TOTAL	14,547	100.0	61,652	100.0

	<u>NO. OF BILLS</u>		<u>MWH SALES</u>	
	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>
<u>FORECASTS:</u>				
RATE H:	<u>100.0</u>	<u>12,504</u>	<u>100.0</u>	<u>53,400</u>
TOTAL	100.0	12,504	100.0	53,400

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE H - COMMERCIAL COOKING, HEATING, AIR
CONDITIONING AND REFRIGERATION SERVICE

DETERMINATION OF TEST-YEAR BILLING LOADS BY SERVICE PHASE

	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>BILLED KW</u>	<u>KWH/KW</u>
<u>RECORDED:</u>				
RATE H:				
1 PHASE	4,638	31.9	23,492.3	
3 PHASE	<u>9,909</u>	<u>68.1</u>	<u>99,370.5</u>	
TOTAL	14,547	100.0	122,862.8	

RATES H TOTAL

1 PHASE	4,638	31.9	23,492.3	
3 PHASE	<u>9,909</u>	<u>68.1</u>	<u>99,370.5</u>	
TOTAL	14,547	100.0	122,862.8	501.79

	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>
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FORECASTS:

1 PHASE	31.9	3,989
3 PHASE	<u>68.1</u>	<u>8,515</u>
TOTAL	100.0	12,504

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE H - COMMERCIAL COOKING, HEATING, AIR
CONDITIONING AND REFRIGERATION SERVICE

DETERMINATION OF TEST-YEAR BILLS BY SERVICE PHASE

	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>
<u>FORECAST:</u>		
<u>RATE H:</u>		
1 PHASE	31.9	3,989
3 PHASE	<u>68.1</u>	<u>8,515</u>
TOTAL	100.0	12,504

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DISTRIBUTION OF SALES & BILLS
BY VOLTAGE SUPPLY SERVICE

<u>RECORDED:</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>	<u>PERCENT OF TOTAL</u>	<u>GVARH</u>
PT1	48	1.1	164,175	5.4	75.365981
PT2	-	0.0	0	0.0	0.000000
PP3	1,889	43.9	2,025,043	66.7	326.625484
PP4	96	2.2	22,400	0.7	5.058145
PS5	193	4.5	158,129	5.2	35.714715
PS	<u>2,079</u>	<u>48.3</u>	<u>666,815</u>	<u>22.0</u>	<u>264.411802</u>
TOTAL	4,305	100.0	3,036,563	100.0	707.176127

<u>FORECASTS:</u>	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>
PT1	1.1	48	5.4	173,740
PT2	0.0	-	0.0	0
PP3	43.9	1,896	66.7	2,146,006
PP4	2.2	95	0.7	22,522
PS5	4.5	194	5.2	167,305
PS	<u>48.3</u>	<u>2,087</u>	<u>22.0</u>	<u>707,827</u>
TOTAL	100.0	4,320	100.0	3,217,400

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING KW
BY VOLTAGE SUPPLY SERVICE

<u>TYPE OF CUSTOMERS:</u>	<u>RECORDED</u>		<u>FORECASTS</u>	
	<u>KW</u>	<u>KWH/KW</u>	<u>KW</u>	<u>KWH/KW</u>
PT1	300,821	545.76	318,345	545.76
PT2	-	-	-	-
PP3	4,019,744	503.77	4,259,892	503.77
PP4	42,484	527.26	42,715	527.26
PS5	387,619	407.95	410,112	407.95
PS	<u>1,410,993</u>	<u>472.59</u>	<u>1,497,761</u>	<u>472.59</u>
TOTAL	6,161,660.0	492.82	6,528,825	492.82

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR SCHEDULE PS5 CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. <u>USE/BILL</u>	CUM UNIT @ EA. UPPER LIM. AS % <u>OF TOTAL</u>	% UNITS BILLED IN <u>EA. BLOCK</u>	UNITS BILLED IN <u>EA. BLOCK</u>
<u>DEMAND CHARGE:</u>				
0 - 500 KW	23.65	23.65	23.65	96,991
501 - 1500 KW	70.96	65.21	41.56	170,443
> 1500 KW		100.00	34.79	142,678
TOTAL			100.00	410,112
<u>ENERGY CHARGE:</u>				
0 - 200 KWH/KW		45.98	45.98	76,927
201 - 400 KWH/KW		83.79	37.81	63,258
> 400 KWH/KW		100.00	16.21	27,119
TOTAL			100.00	167,305
<u>FORECASTS:</u>				
SALES, MWH	167,305			
BILLS	194			
KW	410,112			
KWH/BILL	862,397			
KW/BILL	2,114			

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF REVENUES AND NETWORK ADJ. FOR NETWORK SERVICE

Rate Block	Billing Units	PRESENT RATES		PROPOSED RATES	
		Unit Price	Revenues \$000s	Unit Price	Revenues \$000s
<u>DEMAND CHARGE:</u>	<u>kW</u>	<u>\$/kW</u>		<u>\$/kW</u>	
0 - 500 KW	96,991	10.00	\$969.9	16.35	\$1,585.8
501 - 1500 KW	170,443	9.50	\$1,619.2	15.85	\$2,701.5
> 1500 KW	142,678	8.50	\$1,212.8	14.85	\$2,118.8
SUBTOTAL	410,112		\$3,801.9		\$6,406.1
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/kWh</u>		<u>¢/kWh</u>	
0 - 200 KWH/KW	76,927	7.2087	\$5,545.4	11.9578	\$9,198.8
201 - 400 KWH/KW	63,258	6.4104	\$4,055.1	11.1595	\$7,059.3
> 400 KWH/KW	27,119	6.1010	\$1,654.5	10.8503	\$2,942.5
SUBTOTAL	167,304		\$11,255.0		\$19,200.6
Total Demand & Energy			\$15,056.9		\$25,606.7
<u>Supply Voltage Adj.</u>		<u>% Adj.</u>		<u>% Adj.</u>	
Network Adjustment		0.9	\$135.5	0.9	\$230.5

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR SCHEDULE PS CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE.	CUM UNIT @ EA. UPPER LIM. AS %	% UNITS BILLED IN	UNITS BILLED IN
	<u>USE/BILL</u>	<u>OF TOTAL</u>	<u>EA. BLOCK</u>	<u>EA. BLOCK</u>
<u>DEMAND CHARGE:</u>				
0 - 500 KW	59.78	54.74	54.74	1,044,370
501 - 1500 KW	179.34	84.27	29.53	563,395
> 1500 KW		100.00	15.73	300,108
TOTAL			100.00	1,907,873
<u>ENERGY CHARGE:</u>				
0 - 200 KWH/KW		42.37	42.37	370,793
201 - 400 KWH/KW		81.31	38.94	340,776
> 400 KWH/KW		100.00	18.69	163,563
TOTAL			100.00	875,132
<u>FORECASTS:</u>				
SALES, MWH	875,132			
BILLS	2,281			
KW	1,907,873			
KWH/BILL	383,662			
KW/BILL	836			

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF POWER FACTOR ADJUSTMENT

	Recorded	Forecast
Kwh	824,944,284	
Kvarhrs	300,126,517	
POWER FACTOR CALCULATED	93.97	93.97
	<u>Present Rates</u>	<u>Proposed Rates</u>
CALCULATED PF (%)	94.0	94.0
BASE PF (%)	85.0	85.0
DIFFERENCE	(9.0)	(9.0)
ADJ. FOR EA. 1% DIFF.	0.001	0.001
PF ADJUSTMENT RATE	(0.009)	(0.009)
Demand + Energy Charges	\$76,900.4	\$130,576.5
POWER FACTOR ADJUSTMENT	(\$692.1)	(\$1,175.2)

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PS - LARGE POWER SECONDARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS
FOR RIDER SERVICE AT PRESENT RATES

<u>RIDER M(B)</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
Rider Mb PS1	(\$2.8)	(\$4.3)
Rider Mb PS2	(\$18.6)	(\$28.3)
Rider Mb PS3	(\$12.9)	(\$19.5)
Rider Mb PS4	(\$22.4)	(\$34.2)
Rider Mb PS5	(\$8.6)	(\$12.9)
Rider Mb PS6	(\$11.4)	(\$17.1)
Rider Mb PS7	(\$5.7)	(\$8.6)
TOTAL	(\$82.4)	(\$124.9)
<u>RIDER I</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
Rider I PS1	(\$13.1)	(\$19.7)
Rider I PS2	<u>\$0.0</u>	<u>(\$8.3)</u>
TOTAL	(\$13.1)	(\$28.0)
<u>RIDER T</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
Rider T PS1	<u>(\$3.7)</u>	<u>(\$3.7)</u>
TOTAL	(\$3.7)	(\$3.7)
<u>RULE 4 CHP CUSTOMERS</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
CHP PS1	\$0.0	\$0.0
CHP PS2	\$0.0	\$0.0
CHP PS3	<u>\$0.0</u>	<u>\$0.0</u>
TOTAL	\$0.0	\$0.0

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS1

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtailable Load		26.9				
Billing kW	672.5	652.3				
kWh Per Month	284,920	284,920				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	89	89				
kVarhr Per Month	146,460	146,460				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	134,500	130,460	\$9,696	\$9,404	\$16,083	\$15,600
201 - 400 kWh/kW	134,500	130,460	\$8,622	\$8,363	\$15,010	\$14,559
>400 kWh/kW	15,920	24,000	\$971	\$1,464	\$1,727	\$2,604
Subtotal	284,920	284,920	\$19,289	\$19,231	\$32,820	\$32,763
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$5,000	\$5,000	\$8,175	\$8,175
501 - 1500 kWb	172.5	152.3	\$1,639	\$1,447	\$2,734	\$2,414
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	672.5	652.3	\$6,639	\$6,447	\$10,909	\$10,589
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$104)	(\$103)	(\$175)	(\$173)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$26,144	\$25,905	\$43,904	\$43,539
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$26,144	\$25,905	\$43,904	\$43,539
Total Revenue Per Year (\$000s)			\$313.7	\$310.9	\$526.8	\$522.5
Rider Adjustment (\$000s/Yr)				(\$2.8)		(\$4.3)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS2

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtailable Load		171.0				
Billing kW	786.0	657.7				
kWh Per Month	327,733	327,733				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	100	100				
kVarhr Per Month	30,533	30,533				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	157,200	131,540	\$11,332	\$9,482	\$18,798	\$15,729
201 - 400 kWh/kW	157,200	131,540	\$10,077	\$8,432	\$17,543	\$14,679
>400 kWh/kW	13,333	64,653	\$813	\$3,944	\$1,447	\$7,015

On-Peak Surcharge	0	\$0	\$0
Off-Peak Credit	0	\$0	\$0
Rider T Energy Charge Adjustment	0	\$0	\$0

<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$5,000	\$5,000	\$8,175	\$8,175
501 - 1500 kWb	286.0	157.7	\$2,717	\$1,498	\$4,533	\$2,500
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	786.0	657.7	\$7,717	\$6,498	\$12,708	\$10,675

Customer Charge		\$320	\$320	\$350	\$350
Time-of-Day Metering Charge			\$10		\$10
Power Factor Adjustment		(\$449)	(\$425)	(\$757)	(\$721)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS3

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtailable Load		116.2				
Billing kW	579.0	491.8				
kWh Per Month	289,620	289,620				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	80	80				
kVarhr Per Month	216,507	216,507				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	115,800	98,360	\$8,348	\$7,090	\$13,847	\$11,762
201 - 400 kWh/kW	115,800	98,360	\$7,423	\$6,305	\$12,923	\$10,976
>400 kWh/kW	58,020	92,900	\$3,540	\$5,668	\$6,295	\$10,080
Subtotal	289,620	289,620	\$19,311	\$19,063	\$33,065	\$32,818
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	491.8	\$5,000	\$4,918	\$8,175	\$8,041
501 - 1500 kWb	79.0	0.0	\$751	\$0	\$1,252	\$0
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	579.0	491.8	\$5,751	\$4,918	\$9,427	\$8,041
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			\$125	\$120	\$212	\$204
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$25,507	\$24,431	\$43,054	\$41,423
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$25,507	\$24,431	\$43,054	\$41,423
Total Revenue Per Year (\$000s)			\$306.1	\$293.2	\$516.6	\$497.1
Rider Adjustment (\$000s/Yr)				(\$12.9)		(\$19.5)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS4

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtaillable Load		206.0				
Billing kW	906.9	752.4				
kWh Per Month	351,480	351,480				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	83	83				
kVarhr Per Month	236,740	236,740				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	181,380	150,480	\$13,075	\$10,848	\$21,689	\$17,994
201 - 400 kWh/kW	170,100	150,480	\$10,904	\$9,646	\$18,982	\$16,793
>400 kWh/kW	0	50,520	\$0	\$3,082	\$0	\$5,482
Subtotal	351,480	351,480	\$23,979	\$23,576	\$40,671	\$40,269
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$5,000	\$5,000	\$8,175	\$8,175
501 - 1500 kWb	406.9	252.4	\$3,866	\$2,398	\$6,449	\$4,001
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	906.9	752.4	\$8,866	\$7,398	\$14,624	\$12,176
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			\$66	\$62	\$111	\$105
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$33,231	\$31,366	\$55,756	\$52,910
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$33,231	\$31,366	\$55,756	\$52,910
Total Revenue Per Year (\$000s)			\$398.8	\$376.4	\$669.1	\$634.9
Rider Adjustment (\$000s/Yr)				(\$22.4)		(\$34.2)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS5

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtailable Load		150.0				
Billing kW	500.0	387.5				
kWh Per Month	270,000	270,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	85	85				
kVarhr Per Month	167,331	167,331				
<u>Energy Charge:</u>						
0.000 kWh/kVA	100,000	77,500	\$7.209	\$5.587	\$11,958	\$9,267

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS6

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:						
Curtailable Load		200.0				
Billing kW	550.0	400.0				
kWh Per Month	297,000	297,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	85	85				
kVarhr Per Month	184,064	184,064				
Energy Charge:						
0 - 200 kWh/kW	110,000	80,000	\$7,930	\$5,767	\$13,154	\$9,566
201 - 400 kWh/kW	110,000	80,000	\$7,051	\$5,128	\$12,275	\$8,928
>400 kWh/kW	77,000	137,000	\$4,698	\$8,358	\$8,355	\$14,865
Subtotal	297,000	297,000	\$19,679	\$19,253	\$33,784	\$33,359
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
Demand Charge:						
0 - 500 kWb	500.0	400.0	\$5,000	\$4,000	\$8,175	\$6,540
501 - 1500 kWb	50.0	0.0	\$475	\$0	\$793	\$0
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	550.0	400.0	\$5,475	\$4,000	\$8,968	\$6,540
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			\$0	\$0	\$0	\$0
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$25,474	\$23,583	\$43,102	\$40,259
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$25,474	\$23,583	\$43,102	\$40,259
Total Revenue Per Year (\$000s)			\$305.7	\$283.0	\$517.2	\$483.1
Rider Adjustment (\$000s/Yr)				(\$11.4)		(\$17.1)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PS7

<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
<u>Sch. PS</u>	<u>Rider M/h</u>	<u>Sch. PS</u>	<u>Rider M/h</u>	<u>Sch. PS</u>	<u>Rider M/h</u>

Billing Load Per Month:

Curtailable Load		100.0
Billing kW	400.0	325.0
kWh Per Month	216,000	216,000
On-Peak kWh		0
Off-Peak kWh		0
Power Factor	85	85
kVarhr Per Month	133,865	133,865

Energy Charge:

0 - 200 kWh/kW	80,000	65,000	\$5,767	\$4,686	\$9,566	\$7,773
201 - 400 kWh/kW	80,000	65,000	\$5,128	\$4,167	\$8,928	\$7,254
>400 kWh/kW	56,000	86,000	\$3,417	\$5,247	\$6,076	\$9,331
Subtotal	216,000	216,000	\$14,312	\$14,100	\$24,570	\$24,358
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Total				\$0		\$0

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider I PS1

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider I	Sch. PS	Rider I	Sch. PS	Rider I
Billing Load Per Month:						
Curtailable Load		0.0				
Billing kW	574.0	401.8				
kWh Per Month	314,167	314,167				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	85	85				
kVarhr Per Month	194,703	194,703				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	114,800	80,360	\$8,276	\$5,793	\$13,728	\$9,609
201 - 400 kWh/kW	114,800	80,360	\$7,359	\$5,151	\$12,811	\$8,968
>400 kWh/kW	84,567	153,447	\$5,159	\$9,362	\$9,176	\$16,649
Subtotal	314,167	314,167	\$20,794	\$20,306	\$35,715	\$35,226
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	401.8	\$5,000	\$4,018	\$8,175	\$6,569
501 - 1500 kWb	74.0	0.0	\$703	\$0	\$1,173	\$0
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	574.0	401.8	\$5,703	\$4,018	\$9,348	\$6,569
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$0		\$0
Power Factor Adjustment			\$0	\$0	\$0	\$0
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$26,817	\$24,644	\$45,413	\$42,145
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$26,817	\$24,644	\$45,413	\$42,145
Total Revenue Per Year (\$000s)			\$321.8	\$295.7	\$545.0	\$505.7
Rider Adjustment (\$000s/Yr)				(\$13.1)		(\$19.7)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider I PS2

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider I	Sch. PS	Rider I	Sch. PS	Rider I
Billing Load Per Month:						
Interruptible Load		250.0				
Billing kW	738.1	663.1				
kWh Per Month	398,440	398,440				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	100	100				
kVarhr Per Month	39,994	39,994				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	147,620	132,620	\$0	\$0	\$17,652	\$15,858
201 - 400 kWh/kW	147,620	132,620	\$0	\$0	\$16,474	\$14,800
>400 kWh/kW	103,200	133,200	\$0	\$0	\$11,198	\$14,453
Subtotal	398,440	398,440	\$0	\$0	\$45,324	\$45,111
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$0	\$0	\$8,175	\$8,175
501 - 1500 kWb	238.1	163.1	\$0	\$0	\$3,774	\$2,585
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	738.1	663.1	\$0	\$0	\$11,949	\$10,760
Customer Charge			\$0	\$0	\$350	\$350
Time-of-Day Metering Charge				\$0		\$0
Power Factor Adjustment			\$0	\$0	(\$859)	(\$838)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$0	\$0	\$56,764	\$55,383
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$0	\$0	\$56,764	\$55,383
Total Revenue Per Year (\$000s)			\$0.0	\$0.0	\$681.2	\$664.6
Rider Adjustment (\$000s/Yr)				\$0.0		(\$8.3)

Hawaiian Electric Company, Inc.
Schedule PS - Large Power Secondary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider T PS1

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PS	Rider T	Sch. PS	Rider T	Sch. PS	Rider T
Billing Load Per Month:						
Curtaillable Load						
Billing kW	1,052.0	1,051.2				
kWh Per Month	506,733	506,733				
On-Peak kWh		297,800				
Off-Peak kWh		208,933				
Power Factor	88	88				
kVarhr Per Month	279,100	279,100				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	210,400	210,240	\$15,167	\$15,156	\$25,159	\$25,140
201 - 400 kWh/kW	210,400	210,240	\$13,487	\$13,477	\$23,480	\$23,462
>400 kWh/kW	85,933	86,253	\$5,243	\$5,262	\$9,324	\$9,359
Subtotal	506,733	506,733	\$33,897	\$33,895	\$57,963	\$57,961
On-Peak Surcharge		297,800		\$5,956		\$5,956
Off-Peak Credit		208,933		(\$6,268)		(\$6,268)
Rider T Energy Charge Adjustment		506,733		(\$312)		(\$312)
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$5,000	\$5,000	\$8,175	\$8,175
501 - 1500 kWb	552.0	551.2	\$5,244	\$5,236	\$8,749	\$8,737
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	1,052.0	1,051.2	\$10,244	\$10,236	\$16,924	\$16,912
Customer Charge			\$320	\$320	\$350	\$350
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$132)	(\$132)	(\$225)	(\$225)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$44,329	\$44,017	\$75,012	\$74,696
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$44,329	\$44,017	\$75,012	\$74,696
Total Revenue Per Year (\$000s)			\$531.9	\$528.2	\$900.1	\$896.4
Rider Adjustment (\$000s/Yr)				(\$3.7)		(\$3.7)

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DISTRIBUTION OF SALES & BILLS
BY VOLTAGE SUPPLY SERVICE

<u>RECORDED:</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>	<u>PERCENT OF TOTAL</u>	<u>GVARH</u>
PT1	48	1.1	164,175	5.4	75.365981
PT2	-	0.0	0	0.0	0.000000
PP3	1,889	43.9	2,025,043	66.7	326.625484
PP4	96	2.2	22,400	0.7	5.058145
PS5	193	4.5	158,129	5.2	35.714715
PS	<u>2,079</u>	<u>48.3</u>	<u>666,815</u>	<u>22.0</u>	<u>264.411802</u>
TOTAL	4,305	100.0	3,036,563	100.0	707.176127

<u>FORECASTS:</u>	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>
PT1	1.1	48	5.4	173,740
PT2	0.0	-	0.0	0
PP3	43.9	1,896	66.7	2,146,006
PP4	2.2	95	0.7	22,522
PS5	4.5	194	5.2	167,305
PS	<u>48.3</u>	<u>2,087</u>	<u>22.0</u>	<u>707,827</u>
TOTAL	100.0	4,320	100.0	3,217,400

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING KW
BY VOLTAGE SUPPLY SERVICE

<u>TYPE OF CUSTOMERS:</u>	<u>RECORDED</u>		<u>FORECASTS</u>	
	<u>KW</u>	<u>KWH/KW</u>	<u>KW</u>	<u>KWH/KW</u>
PT1	300,821	545.76	318,345	545.76
PT2	-	-	-	-
PP3	4,019,744	503.77	4,259,892	503.77
PP4	42,484	527.26	42,715	527.26
PS5	387,619	407.95	410,112	407.95
PS	<u>1,410,993</u>	<u>472.59</u>	<u>1,497,761</u>	<u>472.59</u>
TOTAL	6,161,660.0	492.82	6,528,825	492.82

HAWAIIAN ELECTRIC COMPANY, INC.
 SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE
 DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
 FOR SCHEDULE PP CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. <u>USE/BILL</u>	CUM UNIT @ EA. UPPER LIM. AS % <u>OF TOTAL</u>	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN EA. BLOCK
<u>DEMAND CHARGE:</u>				
0 - 500 KW	23.14	22.15	22.15	953,027
501 - 1500 KW	69.41	44.45	22.30	959,481
> 1500 KW		100.00	<u>55.55</u>	<u>2,390,098</u>
TOTAL			100.00	4,302,607
<u>ENERGY CHARGE:</u>				
0 - 200 KWH/KW		37.27	37.27	808,210
201 - 400 KWH/KW		71.80	34.53	748,793
> 400 KWH/KW		100.00	<u>28.20</u>	<u>611,525</u>
TOTAL			100.00	2,168,528
<u>FORECASTS:</u>				
SALES, MWH	2,168,528			
BILLS	1,991			
KW	4,302,607			
KWH/BILL	1,089,165.24			
KW/BILL	2,161.03			

HAWAIIAN ELECTRIC COMPANY, INC.
DOCKET NO. 04-0113 TEST-YEAR: 2005
SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE
DETERMINATION OF POWER FACTOR ADJUSTMENT

	Recorded	Forecast
KWH		
KVARHR		
POWER FACTOR	95.0000	95.0000

	<u>Present Rates</u>	<u>Proposed Rates</u>
CALCULATED PF (%)	95.0	95.0
BASE PF (%)	<u>85.0</u>	<u>85.0</u>
DIFFERENCE	(10.0)	(10.0)
ADJ. FOR EA. 1% DIFF.	0.001	0.001
PF ADJUSTMENT RATE	(0.010)	(0.010)
TOTAL PFC ENERGY CHRG	\$170,062.0	\$312,276.8

POWER FACTOR ADJ.	(\$1,790.6)	(\$3,122.8)
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Hawaiian Electric Company, Inc.

Docket No. 04-0113 TY 2005

Schedule PP - Large Power Primary Voltage Service

Determination of Secondary Metering Adjustment for PP4 Service At Proposed

RATE BLOCKS	BILLING UNITS	SCHEDULE PP PROPOSED RATES	
		Unit Price	Revenues \$000s
<u>DEMAND CHARGE:</u>	<u>Kw</u>	<u>\$/Kw</u>	
0 - 500 KW	38,845.0	16.15	\$627.3
> 500 KW	3,870.0	15.65	\$60.6
SUBTOTAL	42,715.0		\$687.9
<u>ENERGY CHARGE:</u>	<u>MWH</u>	<u>¢/KWh</u>	
0 - 200 KWH/KW	8,542.0	11.9604	\$1,021.7
201 - 400 KWH/KW	8,516.0	11.1772	\$951.9
> 400 KWH/KW	5,464.0	10.8737	\$594.1
SUBTOTAL	22,522.0		\$2,567.7
Total Energy & Demand			\$3,255.6
Customer Charge	95	400.00	\$38.0
		<u>¢/KWh</u>	
Sec. Metering Adj.	0.015	0.2168	\$48.8
Total Revenues			\$3,342.4

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE
BASED ON DOCKET NO. 04-0113 TEST-YEAR: 2005

SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS
FOR RIDER SERVICE

<u>RIDER M(B)</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
Rider Mb PP1	(\$62.7)	(\$95.4)
Rider Mb PP2	(\$2.7)	(\$4.2)
Rider Mb PP3	(\$4.3)	(\$6.6)
Rider Mb PP4	(\$658.3)	(\$1,032.0)
Rider Mb PP5	(\$59.3)	(\$96.1)
Rider Mb PP6	(\$22.4)	(\$34.2)
Rider Mb PP7	(\$7.5)	(\$11.6)
Rider Mb PP8	(\$44.3)	(\$69.3)

TOTAL	(\$861.5)	(\$1,349.4)
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<u>RIDER I</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
Rider I PP1	(\$30.2)	(\$46.0)
Rider I PP2	(\$87.5)	(\$137.2)
Rider I PP3	(\$32.1)	(\$49.5)
Rider I PP4	(\$14.8)	(\$23.9)
Rider I PP5	\$0.0	(\$3.1)
Rider I PP6	\$0.0	(\$3.0)
Rider I PP7	\$0.0	(\$3.1)
Rider I PP8	\$0.0	(\$6.5)
Rider I PP9	\$0.0	(\$8.2)
TOTAL	(\$164.6)	(\$280.5)

<u>MULTIPLE RIDERS</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
RiderMult PP1	(\$5.2)	(\$8.2)
RiderMult PP2	(\$66.8)	(\$104.1)
TOTAL	(\$72.0)	(\$112.3)

<u>RULE 4 CHP CUSTOMERS</u>	<u>PRESENT</u> <u>(\$1000s)</u>	<u>PROPOSED</u> <u>(\$1000s)</u>
CHP PP1	\$0.0	\$0.0
CHP PP2	\$0.0	\$0.0
CHP PP3	\$0.0	\$0.0
TOTAL	\$0.0	\$0.0

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP1

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		580.0				
Billing kW	890.0	455.0				
kWh Per Month	380,000	380,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	95	95				
kVarhr Per Month	126,000	126,000				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	178,000	91,000	\$12,587	\$6,435	\$21,290	\$10,884
201 - 400 kWh/kW	178,000	91,000	\$11,193	\$5,722	\$19,895	\$10,171
>400 kWh/kW	24,000	198,000	\$1,436	\$11,850	\$2,610	\$21,530
Subtotal	380,000	380,000	\$25,216	\$24,007	\$43,795	\$42,585
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	455.0	\$4,905	\$4,464	\$8,075	\$7,348
501 - 1500 kWb	390.0	0.0	\$3,635	\$0	\$6,104	\$0
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	890.0	455.0	\$8,540	\$4,464	\$14,179	\$7,348
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$338)	(\$285)	(\$580)	(\$499)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$33,738	\$28,516	\$57,794	\$49,844
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$33,738	\$28,516	\$57,794	\$49,844
Total Revenue Per Year (\$000s)			\$404.9	\$342.2	\$693.5	\$598.1
Rider Adjustment (\$000s/Yr)				(\$62.7)		(\$95.4)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP2

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		26.4				
Billing kW	756.2	736.4				
kWh Per Month	381,950	381,950				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	99	99				
kVarhr Per Month	45,300	45,300				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	151,240	147,280	\$10,695	\$10,415	\$18,089	\$17,615
201 - 400 kWh/kW	151,240	147,280	\$9,511	\$9,262	\$16,904	\$16,462
>400 kWh/kW	79,470	87,390	\$4,756	\$5,230	\$8,641	\$9,503
Subtotal	381,950	381,950	\$24,962	\$24,907	\$43,634	\$43,580
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	256.2	236.4	\$2,388	\$2,203	\$4,010	\$3,700
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	756.2	736.4	\$7,293	\$7,108	\$12,085	\$11,775
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$452)	(\$448)	(\$780)	(\$775)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$32,123	\$31,897	\$55,339	\$54,990
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$32,123	\$31,897	\$55,339	\$54,990
Total Revenue Per Year (\$000s)			\$385.5	\$382.8	\$664.1	\$659.9
Rider Adjustment (\$000s/Yr)				(\$2.7)		(\$4.2)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP3

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtable Load		60.5				
Billing kW	330.0	300.0				
kWh Per Month	174,667	174,667				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	97	97				
kVarhr Per Month	43,250	43,250				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	66,000	60,000	\$4,667	\$4,243	\$7,894	\$7,176
201 - 400 kWh/kW	66,000	60,000	\$4,150	\$3,773	\$7,377	\$6,706
>400 kWh/kW	42,667	54,667	\$2,554	\$3,272	\$4,639	\$5,944
Subtotal	174,667	174,667	\$11,371	\$11,288	\$19,910	\$19,826
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	330.0	300.0	\$3,237	\$2,943	\$5,330	\$4,845
501 - 1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	330.0	300.0	\$3,237	\$2,943	\$5,330	\$4,845
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$175)	(\$171)	(\$303)	(\$296)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$14,753	\$14,390	\$25,337	\$24,785
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$14,753	\$14,390	\$25,337	\$24,785
Total Revenue Per Year (\$000s)			\$177.0	\$172.7	\$304.0	\$297.4
Rider Adjustment (\$000s/Yr)				(\$4.3)		(\$6.6)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP4

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		6,666.0				
Billing kW	53,925.0	48,925.5				
kWh Per Month	28,600,000	28,600,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	98	98				
kVarhr Per Month	5,386,000	5,386,000				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	10,785,000	9,785,100	\$762,661	\$691,953	\$1,289,929	\$1,170,337
201 - 400 kWh/kW	10,785,000	9,785,100	\$678,204	\$615,326	\$1,205,461	\$1,093,700
>400 kWh/kW	7,030,000	9,029,800	\$420,738	\$540,425	\$764,421	\$981,873
Subtotal	28,600,000	28,600,000	\$1,861,603	\$1,847,704	\$3,259,811	\$3,245,910
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	1,000.0	\$9,320	\$9,320	\$15,650	\$15,650
>1500 kWb	52,425.0	47,425.5	\$437,225	\$395,529	\$768,026	\$694,784
Subtotal	53,925.0	48,925.5	\$451,450	\$409,754	\$791,751	\$718,509
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$30,070)	(\$29,347)	(\$52,670)	(\$51,537)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$2,283,303	\$2,228,441	\$3,999,292	\$3,913,292
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$2,283,303	\$2,228,441	\$3,999,292	\$3,913,292
Total Revenue Per Year (\$000s)			\$27,399.6	\$26,741.3	\$47,991.5	\$46,959.5
Rider Adjustment (\$000s/Yr)				(\$658.3)		(\$1,032.0)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP5

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		650.0				
Billing kW	2,296.6	1,809.1				
kWh Per Month	768,800	768,800				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	88	88				
kVarhr Per Month	410,200	410,200				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	459,320	361,820	\$32,481	\$25,586	\$54,937	\$43,275
201 - 400 kWh/kW	309,480	361,820	\$19,461	\$22,753	\$34,591	\$40,441
>400 kWh/kW	0	45,160	\$0	\$2,703	\$0	\$4,911
Subtotal	768,800	768,800	\$51,942	\$51,042	\$89,528	\$88,627
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	1,000.0	\$9,320	\$9,320	\$15,650	\$15,650
>1500 kWb	796.6	309.1	\$6,644	\$2,578	\$11,670	\$4,528
Subtotal	2,296.6	1,809.1	\$20,869	\$16,803	\$35,395	\$28,253
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$218)	(\$204)	(\$375)	(\$351)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$72,913	\$67,971	\$124,948	\$116,939
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$72,913	\$67,971	\$124,948	\$116,939
Total Revenue Per Year (\$000s)			\$875.0	\$815.7	\$1,499.4	\$1,403.3
Rider Adjustment (\$000s/Yr)				(\$59.3)		(\$96.1)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP6

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		208.0				
Billing kW	1,329.6	1,173.6				
kWh Per Month	747,200	747,200				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	89	89				
kVarhr Per Month	383,600	383,600				
Energy Charge:						
0 - 200 kWh/kW	265,920	234,720	\$18,805	\$16,598	\$31,805	\$28,073
201 - 400 kWh/kW	265,920	234,720	\$16,722	\$14,760	\$29,722	\$26,235
>400 kWh/kW	215,360	277,760	\$12,889	\$16,624	\$23,418	\$30,203
Subtotal	747,200	747,200	\$48,416	\$47,982	\$84,945	\$84,511
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
Demand Charge:						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	829.6	673.6	\$7,732	\$6,278	\$12,983	\$10,542
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	1,329.6	1,173.6	\$12,637	\$11,183	\$21,058	\$18,617
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$244)	(\$237)	(\$424)	(\$413)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$61,129	\$59,258	\$105,979	\$103,125
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$61,129	\$59,258	\$105,979	\$103,125
Total Revenue Per Year (\$000s)			\$733.5	\$711.1	\$1,271.7	\$1,237.5
Rider Adjustment (\$000s/Yr)				(\$22.4)		(\$34.2)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

Rider Mb PP7

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtable Load		71.0				
Billing kW	647.4	594.1				
kWh Per Month	300,000	300,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	98	98				
kVarhr Per Month	67,200	67,200				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	129,480	118,820	\$9,156	\$8,402	\$15,486	\$14,211
201 - 400 kWh/kW	129,480	118,820	\$8,142	\$7,472	\$14,472	\$13,281
401 - 600 kWh/kW	129,480	118,820	\$8,142	\$7,472	\$14,472	\$13,281

Subtotal	300,000	300,000	\$19,754	\$19,606	\$34,421	\$34,273
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	147.4	94.1	\$1,374	\$877	\$2,307	\$1,473
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	647.4	594.1	\$6,279	\$5,782	\$10,382	\$9,548
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$338)	(\$330)	(\$582)	(\$570)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$26,015	\$25,388	\$44,621	\$43,661
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
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Rider Mb PP8

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:						
Curtailable Load		445.2				
Billing kW	1,786.5	1,452.6				
kWh Per Month	1,091,400	1,091,400				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	99	99				
kVarhr Per Month	149,400	149,400				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	357,300	290,520	\$25,266	\$20,544	\$42,735	\$34,747
201 - 400 kWh/kW	357,300	290,520	\$22,468	\$18,269	\$39,936	\$32,472
>400 kWh/kW	376,800	510,360	\$22,551	\$30,545	\$40,972	\$55,495
Subtotal	1,091,400	1,091,400	\$70,285	\$69,358	\$123,643	\$122,714
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	952.6	\$9,320	\$8,878	\$15,650	\$14,908
>1500 kWb	286.5	0.0	\$2,389	\$0	\$4,197	\$0
Subtotal	1,786.5	1,452.6	\$16,614	\$13,783	\$27,922	\$22,983
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$1,217)	(\$1,164)	(\$2,122)	(\$2,040)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$86,002	\$82,307	\$149,843	\$144,067
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$86,002	\$82,307	\$149,843	\$144,067
Total Revenue Per Year (\$000s)			\$1,032.0	\$987.7	\$1,798.1	\$1,728.8
Rider Adjustment (\$000s/Yr)				(\$44.3)		(\$69.3)

Hawaiian Electric Company, Inc.
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Rider I PP1

	Billing Units	Revenue @ Present Rates	Revenue @ Proposed Rates				
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I	
Billing Load Per Month:							
Curtailable Load							
Billing kW	1,217.6	1,007.5					
kWh Per Month	729,600	729,600					
On-Peak kWh		0					
Off-Peak kWh		0					
Power Factor	95	95					
kVarhr Per Month	245,300	245,300					
Energy Charge:							
0 - 200 kWh/kW	243,520	201,500	\$17,221	\$14,249	\$29,126	\$24,100	
201 - 400 kWh/kW	243,520	201,500	\$15,314	\$12,671	\$27,219	\$22,522	
>400 kWh/kW	242,560	326,600	\$14,517	\$19,547	\$26,375	\$35,514	
Subtotal	729,600	729,600	\$47,052	\$46,467	\$82,720	\$82,136	
On-Peak Surcharge		0		\$0		\$0	
Off-Peak Credit		0		\$0		\$0	
Rider T Energy Charge Adjustment		0		\$0		\$0	
Demand Charge:							
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075	
501 - 1500 kWb	717.6	507.5	\$6,688	\$4,730	\$11,230	\$7,942	
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0	
Subtotal	1,217.6	1,007.5	\$11,593	\$9,635	\$19,305	\$16,017	
Customer Charge			\$320	\$320	\$400	\$400	
Time-of-Day Metering Charge							
Power Factor Adjustment			(\$586)	(\$561)	(\$1,020)	(\$982)	

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
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Billing Units	Revenues @ Present Rates	Revenues @ Proposed Rates
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Billing Load Per Month:

Curtailable Load		
Billing kW	2,470.5	1,810.0
kWh Per Month	983,700	983,700
On-Peak kWh		0
Off-Peak kWh		0
Power Factor	90	90
kVarhr Per Month	479,850	479,850

Energy Charge:

0 - 200 kWh/kW	494,100	362,000	\$34,940	\$25,599	\$59,096	\$43,297
201 - 400 kWh/kW	489,600	362,000	\$30,788	\$22,764	\$54,724	\$40,461
>400 kWh/kW	0	259,700	\$0	\$15,543	\$0	\$28,239
Subtotal	983,700	983,700	\$65,728	\$63,906	\$113,820	\$111,997

On-Peak Surcharge	0	\$0	\$0
Off-Peak Credit	0	\$0	\$0
Rider T Energy Charge Adjustment	0	\$0	\$0

Demand Charge:

0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	1,000.0	\$9,320	\$9,320	\$15,650	\$15,650

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
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Rider I PP3

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Curtailable Load						
Billing kW	1,540.0	1,078.0				
kWh Per Month	550,000	550,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	88	88				
kVarhr Per Month	296,859	296,859				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	308,000	215,600	\$21,780	\$15,246	\$36,838	\$25,787
201 - 400 kWh/kW	242,000	215,600	\$15,218	\$13,558	\$27,049	\$24,098
>400 kWh/kW	0	118,800	\$0	\$7,110	\$0	\$12,918
Subtotal	550,000	550,000	\$36,998	\$35,914	\$63,887	\$62,803
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	578.0	\$9,320	\$5,387	\$15,650	\$9,046
>1500 kWb	40.0	0.0	\$334	\$0	\$586	\$0
Subtotal	1,540.0	1,078.0	\$14,559	\$10,292	\$24,311	\$17,121
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			(\$155)	(\$139)	(\$265)	(\$240)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$51,722	\$46,387	\$88,333	\$80,084
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$51,722	\$46,387	\$88,333	\$80,084
Total Revenue Per Year (\$000s)			\$620.7	\$556.6	\$1,060.0	\$961.0
Rider Adjustment (\$000s/Yr)				(\$32.1)		(\$49.5)

Hawaiian Electric Company, Inc.
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Rider I PP4

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Curtailable Load						
Billing kW	1,000.0	760.0				
kWh Per Month	180,000	180,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	85	85				
kVarhr Per Month	111,554	111,554				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	180,000	152,000	\$12,729	\$10,749	\$21,529	\$18,180
201 - 400 kWh/kW	0	28,000	\$0	\$1,761	\$0	\$3,130
>400 kWh/kW	0	0	\$0	\$0	\$0	\$0
Subtotal	180,000	180,000	\$12,729	\$12,510	\$21,529	\$21,310
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	500.0	260.0	\$4,660	\$2,423	\$7,825	\$4,069
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	1,000.0	760.0	\$9,565	\$7,328	\$15,900	\$12,144
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			\$0	\$0	\$0	\$0
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$22,614	\$20,158	\$37,829	\$33,854
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$22,614	\$20,158	\$37,829	\$33,854
Total Revenue Per Year (\$000s)			\$271.4	\$241.9	\$453.9	\$406.2
Rider Adjustment (\$000s/Yr)				(\$14.8)		(\$23.9)

Hawaiian Electric Company, Inc.
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Rider I PP5

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Interruptible Load:		100.0				
Billing kW	2,034.2	2,004.2				
kWh Per Month	1,050,400	1,050,400				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	95	95				
kVarhr Per Month	345,250	345,250				
Energy Charge:						
0 - 200 kWh/kW	406,840	400,840	\$0	\$0	\$48,660	\$47,942
201 - 400 kWh/kW	406,840	400,840	\$0	\$0	\$45,473	\$44,803
>400 kWh/kW	236,720	248,720	\$0	\$0	\$25,740	\$27,045
Subtotal	1,050,400	1,050,400	\$0	\$0	\$119,873	\$119,790
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
Demand Charge:						
0 - 500 kWb	500.0	500.0	\$0	\$0	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	1,000.0	\$0	\$0	\$15,650	\$15,650
>1500 kWb	534.2	504.2	\$0	\$0	\$7,826	\$7,387
Subtotal	2,034.2	2,004.2	\$0	\$0	\$31,551	\$31,112
Customer Charge			\$0	\$0	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			\$0	\$0	(\$1,514)	(\$1,509)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$0	\$0	\$150,310	\$149,793
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$0	\$0	\$150,310	\$149,793
Total Revenue Per Year (\$000s)			\$0.0	\$0.0	\$1,803.7	\$1,797.5
Rider Adjustment (\$000s/Yr)				\$0.0		(\$3.1)

Hawaiian Electric Company, Inc.
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Rider I PP6

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Interruptible Load:		100.0				
Billing kW	4,166.8	4,136.8				
kWh Per Month	2,429,200	2,429,200				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	100	100				
kVarhr Per Month	0	0				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	833,360	827,360	\$0	\$0	\$99,673	\$98,956
201 - 400 kWh/kW	833,360	827,360	\$0	\$0	\$93,146	\$92,476
>400 kWh/kW	762,480	774,480	\$0	\$0	\$82,910	\$84,215
Subtotal	2,429,200	2,429,200	\$0	\$0	\$275,729	\$275,647
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$0	\$0	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	1,000.0	\$0	\$0	\$15,650	\$15,650
>1500 kWb	2,666.8	2,636.8	\$0	\$0	\$39,069	\$38,629
Subtotal	4,166.8	4,136.8	\$0	\$0	\$62,794	\$62,354
Customer Charge			\$0	\$0	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			\$0	\$0	(\$5,078)	(\$5,070)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$0	\$0	\$333,845	\$333,331
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$0	\$0	\$333,845	\$333,331
Total Revenue Per Year (\$000s)			\$0.0	\$0.0	\$4,006.1	\$4,000.0
Rider Adjustment (\$000s/Yr)				\$0.0		(\$3.0)

Hawaiian Electric Company, Inc.
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Rider I PP8

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Interruptible Load:		200.0				
Billing kW	1,117.0	1,057.0				
kWh Per Month	637,000	637,000				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	98	98				
kVarhr Per Month	129,348	129,348				
Energy Charge:						
0 - 200 kWh/kW	223,400	211,400	\$0	\$0	\$26,720	\$25,284
201 - 400 kWh/kW	223,400	211,400	\$0	\$0	\$24,970	\$23,629
>400 kWh/kW	190,200	214,200	\$0	\$0	\$20,682	\$23,291
Subtotal	637,000	637,000	\$0	\$0	\$72,372	\$72,204
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
Demand Charge:						
0 - 500 kWb	500.0	500.0	\$0	\$0	\$8,075	\$8,075
501 - 1500 kWb	617.0	557.0	\$0	\$0	\$9,656	\$8,717
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	1,117.0	1,057.0	\$0	\$0	\$17,731	\$16,792
Customer Charge			\$0	\$0	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			\$0	\$0	(\$1,171)	(\$1,157)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$0	\$0	\$89,332	\$88,239
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$0	\$0	\$89,332	\$88,239
Total Revenue Per Year (\$000s)			\$0.0	\$0.0	\$1,072.0	\$1,058.9
Rider Adjustment (\$000s/Yr)				\$0.0		(\$6.5)

Hawaiian Electric Company, Inc.
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Rider I PP9

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider I	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:						
Interruptible Load:		250.0				
Billing kW	1,093.1	1,018.1				
kWh Per Month	523,350	523,350				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	93	93				
kVarhr Per Month	206,841	206,841				
Energy Charge:						
0 - 200 kWh/kW	218,620	203,620	\$0	\$0	\$26,148	\$24,354
201 - 400 kWh/kW	218,620	203,620	\$0	\$0	\$24,436	\$22,759
>400 kWh/kW	86,110	116,110	\$0	\$0	\$9,363	\$12,625
Subtotal	523,350	523,350	\$0	\$0	\$59,947	\$59,738
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
Demand Charge:						
0 - 500 kWb	500.0	500.0	\$0	\$0	\$8,075	\$8,075
501 - 1500 kWb	593.1	518.1	\$0	\$0	\$9,282	\$8,108
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	1,093.1	1,018.1	\$0	\$0	\$17,357	\$16,183
Customer Charge			\$0	\$0	\$400	\$400
Time-of-Day Metering Charge						
Power Factor Adjustment			\$0	\$0	(\$618)	(\$607)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$0	\$0	\$77,086	\$75,714
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$0	\$0	\$77,086	\$75,714
Total Revenue Per Year (\$000s)			\$0.0	\$0.0	\$925.0	\$908.6
Rider Adjustment (\$000s/Yr)				\$0.0		(\$8.2)

Hawaiian Electric Company, Inc.
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RiderMult PP1

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Rider M(a&b)	Sch. PP3	Rider M(a&b)	Sch. PP3	Rider M(a&b)
Billing Load Per Month:						
Curtailable Load						
Billing kW	654.1	613.9				
kWh Per Month	220,794	220,794				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	79	79				
kVarhr Per Month	154,591	154,591				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	130,820	122,780	\$9,251	\$8,682	\$15,647	\$14,685
201 - 400 kWh/kW	89,974	98,014	\$5,658	\$6,164	\$10,057	\$10,955
>400 kWh/kW	0	0	\$0	\$0	\$0	\$0
Subtotal	220,794	220,794	\$14,909	\$14,846	\$25,704	\$25,640
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	154.1	113.9	\$1,436	\$1,062	\$2,412	\$1,783
>1500 kWb	0.0	0.0	\$0	\$0	\$0	\$0
Subtotal	654.1	613.9	\$6,341	\$5,967	\$10,487	\$9,858
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			\$128	\$125	\$217	\$213
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$21,698	\$21,268	\$36,808	\$36,121
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$21,698	\$21,268	\$36,808	\$36,121
Total Revenue Per Year (\$000s)			\$260.4	\$255.2	\$441.7	\$433.5
Rider Adjustment (\$000s/Yr)				(\$5.2)		(\$8.2)

Hawaiian Electric Company, Inc.
Schedule PP - Large Power Primary Voltage Service
Based On Docket No. 04-0113 Test Year: 2005

RiderMult PP2

	<u>Billing Units</u>		<u>Revenues @ Present Rates</u>		<u>Revenues @ Proposed Rates</u>	
	Sch. PP3	Riders M(b)&I	Sch. PP3	Riders M(b)&I	Sch. PP3	Riders M(b)&I
Billing Load Per Month:						
Curtailable Load						
Billing kW	1,869.5	1,374.6				
kWh Per Month	1,170,600	1,170,600				
On-Peak kWh		0				
Off-Peak kWh		0				
Power Factor	93	93				
kVarhr Per Month	476,100	476,100				
<u>Energy Charge:</u>						
0 - 200 kWh/kW	373,900	274,920	\$26,440	\$19,441	\$44,720	\$32,882
201 - 400 kWh/kW	373,900	274,920	\$23,512	\$17,288	\$41,792	\$30,728
>400 kWh/kW	422,800	620,760	\$25,304	\$37,152	\$45,974	\$67,500
Subtotal	1,170,600	1,170,600	\$75,256	\$73,881	\$132,486	\$131,110
On-Peak Surcharge		0		\$0		\$0
Off-Peak Credit		0		\$0		\$0
Rider T Energy Charge Adjustment		0		\$0		\$0
<u>Demand Charge:</u>						
0 - 500 kWb	500.0	500.0	\$4,905	\$4,905	\$8,075	\$8,075
501 - 1500 kWb	1,000.0	874.6	\$9,320	\$8,151	\$15,650	\$13,687
>1500 kWb	369.5	0.0	\$3,082	\$0	\$5,413	\$0
Subtotal	1,869.5	1,374.6	\$17,307	\$13,056	\$29,138	\$21,762
Customer Charge			\$320	\$320	\$400	\$400
Time-of-Day Metering Charge				\$10		\$10
Power Factor Adjustment			(\$741)	(\$695)	(\$1,293)	(\$1,223)
kVarhr Charge			\$0	\$0	\$0	\$0
Total Base Revenue Per Month			\$92,142	\$86,572	\$160,731	\$152,059
Fuel Oil Adjustment			\$0	\$0	\$0	\$0
Rate Adjustment (AES Refund)			\$0	\$0	\$0	\$0
IRP Adjustment			\$0	\$0	\$0	\$0
DSM Adjustment			\$0	\$0	\$0	\$0
Total Revenue Per Month			\$92,142	\$86,572	\$160,731	\$152,059
Total Revenue Per Year (\$000s)			\$1,105.7	\$1,038.9	\$1,928.8	\$1,824.7
Rider Adjustment (\$000s/Yr)				(\$66.8)		(\$104.1)

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DISTRIBUTION OF SALES & BILLS
BY VOLTAGE SUPPLY SERVICE

<u>RECORDED:</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>	<u>PERCENT OF TOTAL</u>	<u>GVARH</u>
PT1	48	1.1	164,175	5.4	75.365981
PT2	-	0.0	0	0.0	0.000000
<u>PP3</u>	<u>1,896</u>	<u>43.9</u>	<u>2,146,006</u>	<u>66.7</u>	<u>2,146,006</u>

PP4	96	2.2	22,400	0.7	5.058145
PS5	193	4.5	158,129	5.2	35.714715
PS	<u>2,079</u>	<u>48.3</u>	<u>666,815</u>	<u>22.0</u>	<u>264.411802</u>
TOTAL	4,305	100.0	3,036,563	100.0	707.176127

<u>FORECASTS:</u>	<u>PERCENT OF TOTAL</u>	<u>NUMBER OF BILLS</u>	<u>PERCENT OF TOTAL</u>	<u>MWH SALES</u>
PT1	1.1	48	5.4	173,740
PT2	0.0	-	0.0	0
PP3	43.9	1,896	66.7	2,146,006
PP4	2.2	95	0.7	22,522
PS5	4.5	194	5.2	167,305
PS	<u>48.3</u>	<u>2,087</u>	<u>22.0</u>	<u>707,827</u>
TOTAL	100.0	4,320	100.0	3,217,400

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING KW
BY VOLTAGE SUPPLY SERVICE

<u>TYPE OF CUSTOMERS:</u>	<u>RECORDED</u>		<u>FORECASTS</u>	
	<u>KW</u>	<u>KWH/KW</u>	<u>KW</u>	<u>KWH/KW</u>
PT1	300,821	545.76	318,345	545.76
PT2	-	-	-	-
PP3	4,019,744	503.77	4,259,892	503.77
PP4	42,484	527.26	42,715	527.26
PS5	387,619	407.95	410,112	407.95
PS	<u>1,410,993</u>	<u>472.59</u>	<u>1,497,761</u>	<u>472.59</u>
TOTAL	6,161,660.0	492.82	6,528,825	492.82

~~HAWAIIAN ELECTRIC COMPANY, INC.~~

SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR SCHEDULE PT1 CUSTOMERS

	<u>RECORDED</u>		<u>FORECASTS</u>	
	<u>MWH</u>	<u>% OF TOTAL</u>	<u>MWH</u>	<u>% OF TOTAL</u>
<u>SALES, MWH</u>				
0 - 200 KWH/KW	752.3	0.46	799	0.46
201 - 400 KWH/KW	1,556.4	0.95	1,651	0.95
> 400 KWH/KW	<u>161,866.3</u>	<u>98.59</u>	<u>171,290</u>	<u>98.59</u>
TOTAL	164,175.0	100.00	173,740	100.00
 <u>KW BILLED</u>				
	<u>KW</u>	<u>KWH/KW</u>	<u>KW</u>	
0 - 200 KWH/KW	3,948.5	190.53	4,194	
201 - 400 KWH/KW	4,159.1	374.22	4,412	
> 400 KWH/KW	<u>292,713.2</u>	<u>552.99</u>	<u>309,739</u>	
TOTAL	300,820.8	545.76	318,345	

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR SCHEDULE PT1 CUSTOMERS

	<u>LOAD FACTOR BLOCKS (KWH/KW)</u>			
	<u>0 -200</u>	<u>201 - 400</u>	<u>> 400</u>	<u>TOTAL</u>
0 - 200 KWH/KW	799	882	61,948	63,629
201 - 400 KWH/KW	-	769	61,948	62,717
> 400 KWH/KW	-	-	47,394	47,394
SUBTOTAL	799	1,651	171,290	173,740

FORECASTS:

SALES, MWH	799	1,651	171,290	173,740
KW	4,194	4,412	309,739	318,345

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE
DOCKET NO. 04-0113 TEST-YEAR: 2005

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR SCHEDULE PT1 CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. <u>USE/BILL</u>	CUM UNIT @ EA. UPPER LIM. AS % <u>OF TOTAL</u>	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN EA. BLOCK
<u>DEMAND CHARGE:</u>				
0 - 500 KW	7.54	7.54	7.54	24,003
501 - 1500 KW	22.62	22.62	15.08	48,006
> 1500 KW		100.0	<u>77.38</u>	<u>246,335</u>
TOTAL			100.00	318,345

ENERGY CHARGE:

0 - 200 KWH/KW	63,629
201 - 400 KWH/KW	62,717
> 400 KWH/KW	<u>47,394</u>
TOTAL	173,740

FORECASTS:

SALES, MWH	173,740
BILLS	48
KW	318,345
KWH/BILL	3,619,583
KW/BILL	6,632

HAWAIIAN ELECTRIC COMPANY, INC.
DOCKET NO. 04-0113 TEST-YEAR: 2005
SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE

DETERMINATION OF POWER FACTOR ADJUSTMENT

	Recorded	Forecast
KWH	164175040	
KVARHR	75365981	
POWER FACTOR	90.8815	90.8815

	<u>Present Rates</u>	<u>Proposed Rates</u>
CALCULATED PF (%)	91	91
BASE PF (%)	<u>85</u>	<u>85</u>
DIFFERENCE	(6.0)	(6.0)
ADJ. FOR EA. 1% DIFF.	0.001	0.001
PF ADJUSTMENT RATE	(0.006)	(0.006)
TOTAL DMD/ENERGY CHARGE	\$13,817.6	\$24,124.6
POWER FACTOR ADJ.	(\$82.9)	(\$144.7)

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE F - PUBLIC STREET LIGHTING SERVICE
HIGHWAY LIGHTING, & PARK & PLAYGROUND FLOODLIGHTING

DETERMINATION OF TEST-YEAR BILLING LOADS

<u>TOTAL F</u>	<u>RECORDED</u>	<u>FORECASTS</u>
SALES, MWH	39,812.8	40,300
BILLED KW	128,027.7	129,594
KWH/KW	310.97	310.97
NUMBER OF BILLS	4,763	4,872

SECONDARY METERING (with % surcharge)

SALES, MWH	6,386.8	6,448
% OF TOTAL	16.0	16.0
BILLED KW	18,710.6	18,890
KWH/KW	341.35	341.35
NUMBER OF BILLS	924	945
% OF TOTAL	19.4	19.4

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE F - PUBLIC STREET LIGHTING SERVICE
HIGHWAY LIGHTING, & PARK & PLAYGROUND FLOODLIGHTING

DETERMINATION OF TEST-YEAR BILLING LOADS

<u>BILLING BLOCKS:</u>	CUM AT EA. UPPER LIMIT AS % <u>OF TOTAL</u>	PERCENT OF UNITS BILLED IN EACH <u>BLOCK</u>	MWH BILLED IN EACH <u>BLOCK</u>
0 - 150 KWH/KW	46.2	46.2	18,619
> 150 KWH/KW	<u>100.0</u>	<u>53.8</u>	<u>21,681</u>
TOTAL		100.0	40,300

SECONDARY METERING:

0 - 150 KWH/KW	43.9	43.9	2,831
> 150 KWH/KW	<u>100.0</u>	<u>56.1</u>	<u>3,617</u>
TOTAL		100.0	6,448

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE F - PUBLIC STREET LIGHTING SERVICE
HIGHWAY LIGHTING, & PARK & PLAYGROUND FLOODLIGHTING

DETERMINATION OF TEST-YEAR BILLING LOADS
FOR MINIMUM CHARGE PROVISION

	<u>PRESENT RATES</u>	<u>PROPOSED RATES</u>
MIN CHRG less Cust CHRG, \$/M	35.00	15.00
BASE ENERGY, \$/KWH	0.127049	0.188659
F.O.A., \$/KWH	0.05414	0.00000
MINIMUM KWH/MO.	193.17	79.51

	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>SALES, MWH</u>				
TOTAL F	39,813	40,300	39,813	40,300
LT/EQ TO MIN. KWH	6.831	6.9	0.080	-
% OF TOTAL	0.017	0.017	0.000	0.000

	<u>PRESENT RATES</u>		<u>PROPOSED RATES</u>	
	<u>RECORDED</u>	<u>FORECAST</u>	<u>RECORDED</u>	<u>FORECAST</u>
<u>NUMBER OF BILLS</u>				
TOTAL F	4,763	4,872	4,763	4,872
LT/EQ TO MIN. KWH	53	54	1	1
% OF TOTAL	1.113	1.113	0.021	0.021

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE F - PUBLIC STREET LIGHTING SERVICE
HIGHWAY LIGHTING, & PARK & PLAYGROUND FLOODLIGHTING

ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS
FOR MINIMUM CHARGE PROVISION

PRESENT RATES

	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>(MWH)</u>	<u>¢/kWh</u>	
BASE ENERGY CHARGE	6.9	12.7049	\$0.9
FUEL OIL ADJUSTMENT:	6.9	5.414	<u>\$0.4</u>
TOTAL, IF NO MIN CHRG.			\$1.3

	<u>BILLS</u>	<u>\$/Month</u>	
AS BILLED WITH MINIMUM CHARGE:	54	35.00	<u>\$1.9</u>
MINIMUM BILL ADJ.:			\$0.6

PROPOSED RATES

	<u>UNITS BILLED</u>	<u>UNIT PRICE</u>	<u>REVENUES \$1000S</u>
IF NO PROVISION FOR MINIMUM CHRG.:	<u>(MWH)</u>	<u>¢/kWh</u>	
BASE ENERGY CHARGE	0.0	18.8659	\$0.0
FUEL OIL ADJUSTMENT:	0.0	0.000	<u>\$0.0</u>
TOTAL, IF NO MIN CHRG.			\$0.0

	<u>BILLS</u>	<u>\$/Month</u>	
AS BILLED WITH MINIMUM CHARGE:	1	35.00	<u>\$0.0</u>
MINIMUM BILL ADJ.:			\$0.0

HAWAIIAN ELECTRIC COMPANY, INC.
Docket No. 04-0113, Test-Year 2005
SCHEDULE F - PUBLIC STREET LIGHTING SERVICE
HIGHWAY LIGHTING, & PARK & PLAYGROUND FLOODLIGHTING

ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS
FOR SECONDARY METERING

	<u>PRESENT RATES</u>			<u>PROPOSED RATES</u>	
	UNITS BILLED <u>(MWH)</u>	UNIT PRICE <u>CENTS/KWH</u>	REVENUES <u>\$1000S</u>	UNIT PRICE <u>CENTS/KWH</u>	REVENUES <u>\$1000S</u>
ENERGY REVENUES					
ENERGY CHARGE:					
0 - 150 KWH/KW	2,831	12.7049	\$359.7	18.8659	\$534.1
> 150 KWH/KW	<u>3,617</u>	8.7309	<u>\$315.8</u>	14.8920	<u>\$538.6</u>
SUBTOTAL	6,448		\$675.5		\$1,072.7
TOTAL ENERGY REVENUES			<u>\$675.5</u>		<u>\$1,072.7</u>
SEC. METERING % ADJUSTMENT:		2.0%	\$13.5	1.5%	\$16.1

Hawaiian Electric Company, Inc.

TEST YEAR 2005 COMPANY USE

Line	Year	(A) Company No-Charge (MWh)	(B) Sales (MWh)	(C) = (A) ÷ (B) (C) Net Heat Rate (Btu/kWh)
1.	2000	15,515	7,211,760	0.215%
2.	2001	15,541	7,276,681	0.214%
3.	2002	15,379	7,390,367	0.208%
4.	2003	15,002	7,522,230	0.199%
5.	2004	15,521	7,732,834	0.201%
6.	Total	76,958	37,133,871	0.207%
7.	Average	15,392		

Hawaiian Electric Co.
2003 Estimated Demand & Energy Losses
(Kalaheo Capacity Of 209 MW)

	Demand Losses				Energy Losses	
	For System Peak (MW)	Percent	For System Minimum (MW)	Percent	(GWHr)	Percent
HECO Gross Gen	847.7	66.1%	269.8	50.5%	4763.4	58.1%
HECO Aux Load	43.7	3.4%	23.4	4.4%	274.8	3.4%
HECO GSU Tsf Losses	3.1	0.2%	0.9	0.2%	15.0	0.2%
HECO Net Gen	800.9	62.4%	245.4	46.0%	4473.6	54.6%
IPP Gen Injection	435.0	33.9%	264.2	49.5%	3436.6	41.9%
Delivered To Transmission	1235.9	96.4%	509.6	95.4%	7910.2	96.5%
Trans Losses	16.4	1.3%	3.2	0.6%	88.1	1.1%
Trans/Sub Tsf Losses	5.2	0.4%	2.2	0.4%	30.8	0.4%
Delivered To Subtrans	1214.4	94.7%	504.3	94.4%	7791.4	95.0%
Subtrans Losses	6.1	0.5%	1.5	0.3%	28.6	0.3%
Dist Tsf Losses	7.3	0.6%	3.2	0.6%	44.0	0.5%
Delivered To Dist	1201.0	93.6%	499.6	93.6%	7718.8	94.1%
Dist Losses	4.8	0.4%	1.2	0.2%	22.2	0.3%
Sec Tsf Losses	18.1	1.4%	8.8	1.7%	116.9	1.4%
Delivered To Sec	1178.2	91.9%	489.5	91.7%	7579.7	92.4%
Sec Losses	8.7	0.7%	1.5	0.3%	41.2	0.5%
Delivered To Meter	1169.5	91.2%	488.0	91.4%	7538.5	91.9%
Company Use	2.5	0.2%	1.1	0.2%	16.3	0.2%
Sales	1167.0	91.0%	487.0	91.2%	7522.2	91.7%
Total Losses	69.5	5.4%	22.5	4.2%	386.7	4.7%
System Total	1282.7		534.0		8200.0	

Notes:

- 1) "Total Losses" do not include auxiliary station loads.
- 2) Percent values are percent of the "System Total."
- 3) Demand values are estimated per ideal conditions.

HWL
4/16/2004

Electric Company, Inc.
Simulation - (Calibration Run)

Peak - Actual
 Schedule - Actual
 Prices - Actual

	Kahe	Net MWh Generation			Total	Net Heat Rate
		Waiau	Honolulu	Diesel		
033	250,905	90,340	641	-	341,886	10,342
016	227,769	78,137	58	-	305,964	10,195
053	301,494	109,591	4,020	291	415,396	10,193
062	284,826	102,066	3,214	-	390,106	10,192
040	274,062	101,013	3,898	7	378,980	10,347
093	283,994	93,908	2,217	4	380,123	10,336
051	313,819	89,426	4,565	5	407,815	10,274
071	301,536	113,295	5,838	35	420,704	10,320
036	324,395	80,336	5,693	201	410,625	10,297
094	348,245	73,971	7,656	474	430,346	10,326
065	281,161	88,236	2,785	-	372,182	10,285
035	264,343	101,572	4,823	-	370,738	10,348
049	3,456,549	1,121,891	45,408	1,017	4,624,865	10,289
0289	74.7%	24.3%	1.0%	0.0%	100.0%	
0452	72.7%	25.4%	1.5%	0.4%	100.0%	
0159						

Hawaiian Electric Company, Inc.
2003 Actual MBtu Consumption and MWh Generation

Month	Mbtu Consumption				Total	Net MWh Generation			Total	Net Heat Rate	
	Kahe	Waiau	Honolulu	Diesel		Kahe	Waiau	Honolulu		Diesel	Rate
Jan	2,616,844	955,046	23,389	17,732	3,613,011	255,800	91,789	1,210	972	349,770	10,330
Feb	2,354,074	872,011	32,091	5,110	3,263,286	230,664	82,289	1,900	192	315,045	10,358
Mar	3,053,827	1,227,458	88,548	37,827	4,407,659	302,533	113,017	6,103	2,150	423,803	10,400
Apr	2,849,287	1,174,129	83,052	20,983	4,127,451	283,385	107,030	5,812	1,094	397,322	10,388
May	2,622,056	1,243,297	82,351	10,842	3,958,546	259,038	111,910	5,983	476	377,407	10,489
Jun	2,794,094	1,117,349	41,912	25,618	3,978,973	276,738	99,752	2,740	1,099	380,330	10,462
Jul	3,067,262	1,053,653	89,953	18,539	4,229,408	304,866	95,492	6,725	801	407,884	10,369
Aug	2,928,416	1,317,589	102,175	29,199	4,377,380	291,046	118,896	7,623	1,272	418,836	10,451
Sep	3,237,516	1,005,675	114,531	81,572	4,439,294	319,474	87,894	8,858	4,130	420,356	10,561
Oct	3,382,261	969,852	123,024	71,463	4,546,601	333,919	82,663	9,374	3,166	429,121	10,595
Nov	2,761,316	1,084,538	87,982	11,404	3,945,240	271,910	98,243	6,397	450	377,000	10,465
Dec	2,680,959	1,081,684	122,462	28,925	3,914,029	263,582	98,231	9,019	1,238	372,069	10,520
Total	34,347,913 10,123	13,102,280 11,036	991,471 13,820	359,213 21,081	48,800,878 10,452	3,392,954 72.7%	1,187,206 25.4%	71,743 1.5%	17,040 0.4%	4,668,942 100.0%	10,452

Total	24,377,503	1,927,463	12.65	90,725,458	6,299,445	14.40
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IPP Simulated and Actual MWh Generation

Month	AES		Diff.	Simulated	KPLP		Diff.
	Simulated	Actual			Actual	Simulated	
Jan	132,580	132,109	471	116,336	111,483	4,853	
Feb	119,957	118,455	1,502	103,438	99,217	4,221	
Mar	133,053	133,697	(644)	74,315	67,761	6,554	
Apr	128,776	127,752	1,024	79,262	74,230	5,032	
May	133,068	134,037	(969)	123,576	122,157	1,419	
Jun	128,776	129,618	(842)	120,517	120,014	503	
Jul	133,068	133,927	(859)	126,573	127,215	(642)	
Aug	133,068	134,163	(1,095)	125,184	125,650	(466)	
Sep	128,776	119,702	9,074	122,996	122,076	920	
Oct	133,068	134,012	(944)	127,472	124,994	2,478	
Nov	128,776	128,225	551	118,589	117,440	1,149	
Dec	133,068	133,733	(665)	125,064	122,814	2,250	
Total	1,566,034	1,559,430	6,604	1,363,322	1,335,050	28,272	

IPP Simulated and Actual MWh Generation

Month	H-POWER and NonFirm		
	Simulated	Actual	Diff.
Jan	30038	30,534	(496)
Feb	30326	29,408	918
Mar	19319	19,142	177
Apr	29417	29,516	(99)
May	29791	32,974	(3,183)
Jun	29640	29,912	(272)
Jul	30552	29,525	1,027
Aug	28658	28,781	(123)
Sep	27680	27,918	(238)
Oct	22137	25,069	(2,932)
Nov	32004	29,692	2,312
Dec	32550	33,065	(515)
Total	342,112	345,535	-3,423

any, Inc.
- (Unit Characteristics)

Loads Max	Average at Min	Heat Rate (btu/kWh)		Incremental Min	M
		Min	Max		
53	12,733	10,523		1	
54	12,577	10,299		1	
47	12,116	10,200		1	
46	12,198	10,785		1	
55	12,413	11,220		1	
54	11,879	9,661		1	
83	11,003	8,873		1	
86	11,160	8,346		1	
53	21,759	8,400		1	
50	21,704	8,209		1	
82	10,636	8,975		1	
82	10,827	8,915		1	
86	11,092	8,192		1	
85	10,885	8,305		1	
134	10,742	8,100		1	
134	11,539	8,630		1	
83	10,966	9,185		1	
134	10,988	8,854			
82	10,647	9,143			
85	11,020	8,593		1	
86	11,011	9,229		1	
86	11,092	8,192		1	
134	10,819	8,348			
134	10,779	8,379		1	

Prod Sim
Month
Input
Changed

17 January
27 January
14 January
18 January
21 January
30 January
17 January
19 January
19 January
17 January
18 January
11 January
10 January
13 January
12 January
18 January

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15 May
15 May
15 May
11 May
17 June
19 July
11 July
13 December

**FUEL PRICES and GNPIPD INDEX
ECONOMIC DISPATCH**

	<u>L.S.F.O. HONOLULU</u>	<u>L.S.F.O. WAI AU</u>	<u>L.S.F.O. KAHE</u>	<u>DIESEL WAI AU</u>	<u>LSWR KPLP</u>	<u>GNPIPD AES</u>
MBTU Per Barrel	<u>6.2992</u>	<u>6.2992</u>	<u>6.2992</u>	<u>5.7964</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	33.2090	33.2090	33.2090	32.9137	36.9630	144.3488
Thruput	<u>0.5076</u>	<u>0.1342</u>	<u>0.0659</u>			
01/01/2003 Price	<u>33.7166</u>	<u>33.3432</u>	<u>33.2749</u>	<u>32.9137</u>	<u>36.9630</u>	
MBTU Per Barrel	<u>6.2960</u>	<u>6.2960</u>	<u>6.2960</u>	<u>5.7957</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	34.3974	34.3974	34.3974	36.5167	37.7580	144.3488
Thruput	<u>0.5058</u>	<u>0.1321</u>	<u>0.0662</u>			
02/01/2003 Price	<u>34.9032</u>	<u>34.5295</u>	<u>34.4636</u>	<u>36.5167</u>	<u>37.7580</u>	
MBTU Per Barrel	<u>6.2936</u>	<u>6.2936</u>	<u>6.2936</u>	<u>5.7981</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	36.0722	36.0722	36.0722	36.9091	42.0460	144.3488
Thruput	<u>0.5060</u>	<u>0.1414</u>	<u>0.0687</u>			
03/01/2003 Price	<u>36.5782</u>	<u>36.2136</u>	<u>36.1409</u>	<u>36.9091</u>	<u>42.0460</u>	
MBTU Per Barrel	<u>6.2746</u>	<u>6.2746</u>	<u>6.2746</u>	<u>5.7991</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	36.8471	36.8471	36.8471	36.9199	37.6280	144.3488
Thruput	<u>0.5119</u>	<u>0.1355</u>	<u>0.0650</u>			
04/01/2003 Price	<u>37.3590</u>	<u>36.9826</u>	<u>36.9121</u>	<u>36.9199</u>	<u>37.6280</u>	

MBTU Per Barrel	<u>6.3078</u>	<u>6.3078</u>	<u>6.3078</u>	<u>5.7855</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	37.4089	37.4089	37.4089	40.7071	36.9070	144.3488
Thruput	<u>0.5044</u>	<u>0.1543</u>	<u>0.0693</u>			
05/01/2003 Price	<u>37.9133</u>	<u>37.5632</u>	<u>37.4782</u>	<u>40.7071</u>	<u>36.9070</u>	
MBTU Per Barrel	<u>6.2746</u>	<u>6.2746</u>	<u>6.2746</u>	<u>5.7816</u>	<u>6.0000</u>	76.7100
						<u>110.7300</u>
Ave. Price (BBL)	35.7192	35.7192	35.7192	40.6508	34.7060	144.3488
Thruput	<u>0.5055</u>	<u>0.1477</u>	<u>0.0695</u>			
06/01/2003 Price	<u>36.2247</u>	<u>35.8669</u>	<u>35.7887</u>	<u>40.6508</u>	<u>34.7060</u>	
MBTU Per Barrel	<u>6.2813</u>	<u>6.2813</u>	<u>6.2813</u>	<u>5.7867</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	34.1349	34.1349	34.1349	38.3575	32.1980	145.8480
Thruput	<u>0.4970</u>	<u>0.1556</u>	<u>0.0725</u>			
07/01/2003 Price	<u>34.6319</u>	<u>34.2905</u>	<u>34.2074</u>	<u>38.3575</u>	<u>32.1980</u>	
MBTU Per Barrel	<u>6.2800</u>	<u>6.2800</u>	<u>6.2800</u>	<u>5.8078</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	33.6307	33.6307	33.6307	37.8899	31.9560	145.8480
Thruput	<u>0.4985</u>	<u>0.1688</u>	<u>0.0847</u>			
08/01/2003 Price	<u>34.1292</u>	<u>33.7995</u>	<u>33.7154</u>	<u>37.8899</u>	<u>31.9560</u>	
MBTU Per Barrel	<u>6.3321</u>	<u>6.3321</u>	<u>6.3321</u>	<u>5.8222</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	33.4209	33.4209	33.4209	37.9674	32.0330	145.8480
Thruput	<u>0.5528</u>	<u>0.1773</u>	<u>0.0819</u>			
09/01/2003 Price	<u>33.9737</u>	<u>33.5982</u>	<u>33.5028</u>	<u>37.9674</u>	<u>32.0330</u>	

MBTU Per Barrel	<u>6.2975</u>	<u>6.2975</u>	<u>6.2975</u>	<u>5.8093</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	32.9743	32.9743	32.9743	38.0158	30.8040	145.8480
Thruput	<u>0.5506</u>	<u>0.1726</u>	<u>0.0795</u>			
10/01/03 Price	<u>33.5249</u>	<u>33.1469</u>	<u>33.0538</u>	<u>38.0158</u>	<u>30.8040</u>	
MBTU Per Barrel	<u>6.3140</u>	<u>6.3140</u>	<u>6.3140</u>	<u>5.8404</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	32.2538	32.2538	32.2538	38.5090	32.0130	145.8480
Thruput	<u>0.5900</u>	<u>0.1742</u>	<u>0.0769</u>			
11/01/03 Price	<u>32.8438</u>	<u>32.4280</u>	<u>32.3307</u>	<u>38.5090</u>	<u>32.0130</u>	
MBTU Per Barrel	<u>6.2684</u>	<u>6.2684</u>	<u>6.2684</u>	<u>5.8097</u>	<u>6.0000</u>	76.7100
						<u>111.8800</u>
Ave. Price (BBL)	33.0661	33.0661	33.0661	38.3322	35.0080	145.8480
Thruput	<u>0.5827</u>	<u>0.1508</u>	<u>0.0788</u>			
12/01/03 Price	<u>33.6488</u>	<u>33.2169</u>	<u>33.1449</u>	<u>38.3322</u>	<u>35.0080</u>	

**HECO 2003 MAINTENANCE OUTAGES
CALIBRATION PRODUCTION SIMULATION**

<u>Unit</u>	<u>Type</u>	<u>Code</u>	<u>Begin</u>		<u>End</u>		<u>Cap</u>	<u>Red</u>	<u>Description</u>
			<u>Date</u>	<u>Time</u>	<u>Date</u>	<u>Time</u>			
K1	D4	4610	1/1/03	0000	1/4/03	0002	86	18	H2 Cooler Leak
W5	PO	1800	1/1/03	0000	1/31/03	2400	57	0	Boiler Overhaul
H9	PO	4400	1/1/03	0000	1/31/03	2400	57	0	Turbine Generator Minor Outage
K1	MO	4610	1/4/03	0002	1/6/03	0726	86	0	H2 Cooler Leak
K6	MO	3343	1/17/03	2332	1/19/03	1435	142	0	64 FWH Inlet Valve
W3	MO	4022	1/21/03	0700	1/31/03	2400	49	0	#2 Turbine Gland Repair
W3	MO	4022	2/1/03	0000	2/6/03	1530	49	0	#2 Turbine Gland Repair
W5	PO	1800	2/1/03	0000	2/28/03	2400	57	0	Boiler Overhaul
H9	PO	4400	2/1/03	0000	2/28/03	2400	57	0	Turbine Generator Minor Outage
K4	D4	3340	2/16/03	0937	2/22/03	1350	89	9	41 & 42 FWH Tube Leak
K3	D4	3410	2/18/03	0830	2/22/03	0330	90	52	32 BFP Volute Replacement
W4	PO	1800	2/25/03	1057	2/28/03	2400	49	0	Boiler Overhaul
K3	D4	3410	2/27/03	0330	2/28/03	1254	90	50	21 BFP
W4	PO	1800	3/1/03	0000	3/10/03	1421	49	0	Boiler Inspection
H9	PO	4400	3/1/03	0000	3/22/03	1059	57	0	Turbine Generator Minor Outage
W5	PO	1800	3/1/03	0000	3/24/03	1434	57	0	Boiler Overhaul
H9	MO	4609	3/22/03	1830	3/24/03	1555	57	0	Exciter Vibration and Throttle Vlv Leaking
W5	MO	4609	3/29/03	0037	3/29/03	2330	57	0	Reinstall Main Exciter
W6	MO	0840	4/10/03	1000	4/12/03	0624	55	0	Boiler Hot Spot
K3	MO	1799	4/12/03	0032	4/12/03	1638	90	0	Control System
H9	MO	4260	4/12/03	0645	4/17/03	0941	57	0	Throttle Valve
H8	PO	1800	4/21/03	0746	4/30/03	2400	58	0	Boiler Overhaul
H9	MO	3869	4/23/03	0555	4/25/03	1848	57	0	Cable Tray Fire Sprinkler
W5	MO	4609	4/23/03	0912	4/27/03	0130	57	0	Main Exciter - W6 on Spare
H8	PO	1800	5/1/03	0000	5/31/03	2400	58	0	Boiler Overhaul
W6	MO	4609	5/2/03	0639	5/3/03	2017	55	0	Restore Main Exciter
K6	MO	4265	5/3/03	0158	5/15/03	1908	142	0	Turbine Drain Vlv's and Controls
K2	D4	3410	5/20/03	2154	5/22/03	0615	86	46	21 BFP Volute
K2	D4	3410	5/22/03	0615	5/23/03	1614	86	36	21 BFP Volute
K5	PO	1810	5/24/03	0036	5/31/03	2400	142	0	Boiler Inspection and Throttle Valve
K5	PO	1810	6/1/03	0000	6/7/03	0445	142	0	Boiler Inspection and Throttle Valve
H8	PO	1800	6/1/03	0000	6/30/03	2400	58	0	Boiler Overhaul
W4	MO	3260	6/23/03	1130	6/28/03	0845	49	0	Traveling Screen and CWP Exp. Joints
W3	MO	3260	6/30/03	0700	6/30/03	2400	49	0	Traveling Screen
W3	MO	3260	7/1/03	0000	7/3/03	1930	49	0	Traveling Screen
H8	PO	1800	7/1/03	0000	7/31/03	2400	58	0	Boiler Overhaul
K1	MO	1810	7/6/03	2335	7/12/03	1250	86	0	Boiler Tube Inspection - NDT

<u>Unit</u>	<u>Type</u>	<u>Code</u>	<u>Begin</u>		<u>End</u>		<u>Cap</u>	<u>Red</u>	<u>Description</u>
			<u>Date</u>	<u>Time</u>	<u>Date</u>	<u>Time</u>			
H9	MO	3659	7/13/03	0600	7/13/03	1800	57	0	Boiler Warmup Cable Tray Installation
W8	MO	1487	7/14/03	0040	7/18/03	0708	90	0	APH Wash and Duct Work
W3	MO	3110	7/23/03	0716	7/26/03	0430	49	0	Condenser Inspection
W4	MO	3110	7/28/03	0800	7/31/03	0045	49	0	Condenser Inspection
W9	MO	4740	7/31/03	1002	7/31/03	1318	53	0	Reverse Power Relay Checks
H8	PO	1800	8/1/03	0000	8/31/03	2400	58	0	Boiler Overhaul
K3	MO	1488	8/2/03	0104	8/29/03	2221	90	0	APH Baskets
W0	MO	3629	8/20/03	1130	8/20/03	1550	50	0	Mod to Startup Bus Switch Gear
K3	MO	0360	8/31/03	2110	8/31/03	2146	90	0	Burners
H8	PO	1800	9/1/03	0000	9/30/03	2400	58	0	Planned Outage
K2	MO	1420	9/7/03	2230	9/9/03	0930	86	0	Boiler Draft System Inspection
W7	MO	1800	9/10/03	1800	9/30/03	2400	87	0	Maintenance Outage
W0	MO	3622	9/13/03	0828	9/13/03	1721	50	0	Install Station Aux Startup Power Mobile Trfr
W4	MO	3620	9/15/03	2143	9/16/03	0230	49	0	Inspect Main Trmfr for N2 Leak
K4	D4	3414	9/17/03	0910	9/30/03	2400	89	8	41 BFP Controls Problems
W7	MO	1800	10/1/03	0000	10/31/03	2400	87	0	Boiler Overhaul
H8	PO	1800	10/1/03	0000	10/31/03	2400	58	0	Boiler Overhaul
W3	MO	1450	10/4/03	0800	10/4/03	2330	49	0	Replace Attemp Check Valve & APH Wash
W8	MO	3499	10/17/03	2257	10/19/03	0413	90	0	Makeup Water Line and Instr. Air
W3	MO	1040	10/25/03	0910	10/28/03	1115	49	0	Primary SH Header Outlet Pipe
W7	MO	1800	11/1/03	0000	11/1/03	0735	87	0	Boiler Overhaul
H8	PO	1800	11/1/03	0000	11/30/03	2400	58	0	Boiler Overhaul
K6	MO	0500	11/11/03	0026	11/15/03	1830	142	0	SSH Oxide Scale Readings
K4	PO	1800	11/23/03	0010	11/30/03	2400	89	0	Boiler Overhaul
H8	PO	1800	12/1/03	0000	12/8/03	1458	58	0	Boiler Overhaul
K4	PO	1800	12/1/03	0000	12/31/03	2400	89	0	Boiler Overhaul
H8	MO	0510	12/21/03	2357	12/23/03	1600	58	0	Boiler Safety Repairs
K5	MO	1488	12/28/03	1250	12/29/03	0504	142	0	APH Wash

Hawaiian Electric Company, Inc.
2003 Production Simulation Calibration - (AES EAF and EFOR)

	K I L O W A T T H O U R S					M O N T H L Y			CALENDAR YEAR-TO-DATE %				
	Potential	Total Derate	Forced Derate	Maintenance Derate	Available (Potential-Derate)	EAF	100-EAF	EFOR ("F" only)	Maint ("M" only)	EAF	100-EAF	EFOR ("F" only)	Maint ("M" only)
Jan-03	133,920,000	0	0	0	133,920,000	100.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000
Feb-03	120,960,000	0	0	0	120,960,000	100.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000
Mar-03	133,920,000	0	0	0	133,920,000	100.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000
Apr-03	129,600,000	0	0	0	129,600,000	100.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000
May-03	133,920,000	4,299	4,299	0	133,915,701	99.997	0.003	0.003	0.000	99.999	0.001	0.001	0.000
Jun-03	129,600,000	0	0	0	129,600,000	100.000	0.000	0.000	0.000	99.999	0.001	0.001	0.000
Jul-03	133,920,000	0	0	0	133,920,000	100.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000
Aug-03	133,920,000	14,675	14,675	0	133,905,325	99.989	0.011	0.011	0.000	99.998	0.002	0.002	0.000
Sep-03	129,600,000	10,007,879	10,007,879	0	119,592,121	92.278	7.722	7.722	0.000	99.150	0.850	0.850	0.000
Oct-03	133,920,000	0	0	0	133,920,000	100.000	0.000	0.000	0.000	99.237	0.763	0.763	0.000
Nov-03	129,600,000	0	0	0	129,600,000	100.000	0.000	0.000	0.000	99.305	0.695	0.695	0.000
Dec-03	133,920,000	0	0	0	133,920,000	100.000	0.000	0.000	0.000	99.364	0.636	0.636	0.000

Hawaiian Electric Company, Inc.
2003 Production Simulation Calibration - (Kalaheo EAF and EFOR)

Month	PH Period Hrs	FOH Forced Outage Hrs	AH Available Hrs	EUDH		EPDH		EFDHRS			Current Month		Calendar YTD	
				Equiv Unplnd Derated Hrs	SH Service Hrs	Equiv Plnd Derated Hrs	SH Service Hrs	Equiv Forced Derated Hrs	Res Shdwn Hrs	180/90 Derate Equiv Hrs	EAF %	Month EFOR %	EAF %	YTD EFOR %
Jan-03	744.0000	0.0000	744.0000	20.6833	0.0000	0.0000	744.0000	0.0000	0.0000	0.5225	97.15	2.78	97.15	2.78
Feb-03	672.0000	0.0000	658.2167	1.5556	1.1431	1.1431	658.2167	0.0000	0.0000	0.4447	97.48	0.24	97.31	1.59
Mar-03	744.0000	0.0000	600.3333	42.4250	129.0245	129.0245	593.8166	0.0000	0.0000	2.6434	57.29	7.14	83.52	3.24
Apr-03	720.0000	0.0000	720.0000	0.7625	258.8556	258.8556	684.7800	0.0000	0.0000	3.0938	63.51	0.11	78.52	2.44
May-03	744.0000	0.0000	744.0000	0.6167	0.0509	0.0509	744.0000	0.0000	0.0000	0.0333	99.91	0.08	82.91	1.93
Jun-03	720.0000	0.0000	720.0000	1.7139	6.8250	6.8250	720.0000	0.0000	0.0000	0.2657	98.78	0.24	85.54	1.63
Jul-03	744.0000	0.0000	744.0000	4.2185	0.0000	0.0000	741.8167	0.0000	0.0000	0.6073	99.35	0.57	87.56	1.47
Aug-03	744.0000	0.0000	744.0000	0.7167	0.0000	0.0000	744.0000	0.0000	0.0000	0.9430	99.78	0.10	89.12	1.29
Sep-03	720.0000	0.0000	720.0000	2.1069	1.3083	1.3083	720.0000	0.0000	0.0000	0.4219	99.47	0.29	90.26	1.18
Oct-03	744.0000	0.0000	744.0000	0.4939	13.7852	13.7852	744.0000	0.0000	0.0000	1.9227	97.82	0.07	91.03	1.06
Nov-03	720.0000	0.0000	720.0000	0.9667	12.8741	12.8741	720.0000	0.0000	0.0000	0.2071	98.05	0.13	91.66	0.98
Dec-03	744.0000	0.0000	744.0000	0.7486	0.0000	0.0000	744.0000	0.0000	0.0000	0.7768	99.79	0.10	92.35	0.90

Hawaiian Electric Company, Inc.

GENERATING UNIT LOAD CARRYING CAPABILITIES

Unit	(A) Operating Minimum (Net MW)	(B) Normal Top Load (Net MW)
Honolulu 8	22.3	52.9
Honolulu 9	22.5	54.4
Waiau 3	22.1	46.2
Waiau 4	22.3	46.4
Waiau 5	22.6	54.6
Waiau 6	22.5	55.6
Waiau 7	32.7	88.1
Waiau 8	32.7	88.1
Waiau 9	13.9	51.9
Waiau 10	13.9	49.9
Kahe 1	27.7	88.2
Kahe 2	27.9	86.3
Kahe 3	27.8	88.2
Kahe 4	27.8	89.2
Kahe 5	50.4	134.7
Kahe 6	40.1	133.9
Kalaeloa CT1	32.5	90.0
Kalaeloa CT2	32.5	90.0
Kalaeloa Additional Capacity	0.0	29.0
AES-Hawaii	63.0	180.0
H-POWER	25.0	46.0

Hawaiian Electric Company, Inc.

HEAT RATE CONSTANTS

Unit	A Coefficient	B Coefficient	C Coefficient
Honolulu 8	36.4132	10.3115	0.00568
Honolulu 9	69.8920	8.9484	0.02204
Waiau 3	146.5394	4.8113	0.08544
Waiau 4	49.4604	9.3112	0.03203
Waiau 5	61.0595	8.8137	0.02981
Waiau 6	64.1104	8.7407	0.03199
Waiau 7	88.2107	7.9405	0.01961
Waiau 8	86.8712	8.0919	0.01315
Waiau 9	198.6939	7.8497	0.02922
Waiau 10	191.3958	7.2757	0.02851
Kahe 1	73.4991	8.1733	0.01292
Kahe 2	46.0037	9.0952	0.00350
Kahe 3	57.4864	8.5169	0.00634
Kahe 4	75.5539	8.4394	0.00739
Kahe 5	89.3444	8.6434	0.00305
Kahe 6	117.0609	8.1819	0.00769
Kalaeloa CT1	299.0260	4.4109	0.00931
Kalaeloa CT2	299.0260	4.4109	0.00931
Kalaeloa Additional Capacity	0.0100	8.6710	0.00000
AES-Hawaii	258.7479	14.9713	0.00510
H-POWER	10.0000	8.2000	0.00010

Hawaiian Electric Company, Inc.

EQUIVALENT FORCED OUTAGE RATE

Unit	2004	2003	2002	2001	2000	Average
Honolulu 8	23.71%	12.97%	3.62%	10.44%	7.22%	11.59%
Honolulu 9	0.97%	19.98%	3.11%	3.04%	1.42%	5.70%
Waiau 3	24.65%	10.93%	6.53%	1.91%	2.05%	9.21%
Waiau 4	13.44%	3.39%	5.07%	14.82%	3.00%	7.94%
Waiau 5	1.00%	4.10%	2.20%	0.80%	3.63%	2.34%
Waiau 6	0.32%	2.77%	0.63%	3.93%	3.76%	2.28%
Waiau 7	1.24%	0.72%	1.83%	1.57%	0.65%	1.20%
Waiau 8	7.72%	0.00%	0.14%	1.52%	5.32%	2.94%
Waiau 9	63.23%	6.87%	49.88%	4.09%	65.74%	37.96%
Waiau 10	4.38%	36.00%	13.61%	5.00%	13.38%	14.47%
Kahe 1	2.58%	1.16%	2.33%	0.72%	1.23%	1.61%
Kahe 2	2.90%	2.22%	0.98%	3.11%	1.68%	2.18%
Kahe 3	8.78%	3.47%	0.10%	3.91%	0.29%	3.31%
Kahe 4	1.40%	1.30%	3.56%	0.86%	5.73%	2.57%
Kahe 5	7.64%	1.14%	1.03%	0.41%	1.70%	2.39%
Kahe 6	3.25%	1.92%	0.48%	0.36%	0.90%	1.38%
HECO	6.18%	2.37%	1.76%	1.59%	2.45%	2.87%
Kalaeloa						1.00%
AES-Hawaii	(See Mr. Ching's Testimony HECO T-5)					1.00%
H-POWER				Availability Factor		90.00%

Hawaiian Electric Company, Inc.

TEST YEAR 2005 SALES FUEL EFFICIENCY

Line	Description	(D) = (C) ÷ (A) * 1000			
		(A) Net Generation (MWh)	(B) ¹ Fuel (Barrels)	(C) Fuel (MBtu)	(D) Net Heat Rate (Btu/kWh)
1.	Steam	4,815,012	8,218,553	50,955,027	10,583
2.	Diesel - Waiau	6,465	27,658	162,075	25,070
3.	Diesel - CHP	(Treated Separately In the ECAF)			
4.	Total	4,821,477	8,246,211	51,117,102	10,602

SALES PROVIDED BY COMPANY GENERATION

5.	Test Year Sales	7,856,000
6.	Company Generated	58.41%
7.	Sales Provided by Company	4,588,428

SALES FUEL EFFICIENCY

	Company Sales	Company MBtu Consumed
8.	Company Sales and Fuel	4,588,428
9.	Sales Heat Rate	0.011140

¹ Steam's LSFO heat content is 6.2 MBtu/barrel
Diesel's heat content is 5.86 MBtu/barrel

Hawaiian Electric Company, Inc.

HISTORICAL NET HEAT RATE
(\$000)

on	(A) 2000	(B) 2001	(C) 2002	(D) 2003	(E) 2004
il Consumed (MBtu)					
	46,842,368	46,577,520	48,195,589	48,441,659	51,453,940
	127,640	128,605	205,872	359,213	785,235
	46,970,008	46,706,125	48,401,461	48,800,872	52,239,176
3y Generated (MWh)					
	4,477,168	4,484,084	4,628,152	4,651,903	4,881,864
	3,878	4,427	9,754	17,040	36,819
	4,481,045	4,488,510	4,637,906	4,668,942	4,918,684
(Btu/kWh)					
	10,463	10,387	10,414	10,413	10,540
	32,918	29,053	21,106	21,081	21,327
	10,482	10,406	10,436	10,452	10,621

Hawaiian Electric Company, Inc.

TEST YEAR FUEL RELATED EXPENSES
(\$000)

Line	Description	(A) Kahe	(B) Walau	(C) Honolulu	(D) Other	(E) = (A)+(B)+(C)+(D) (E) Total
1.	Facilities Base Fee	617	1,536	-	-	2,153
2.	Pipeline Maintenance	719	68	-	-	787
3.	Tankfarm Management Fee	-	-	-	942	942
4.	In-House Fuel Handling					
5.	Production	-	-	-	-	-
6.	Environmental	-	-	-	-	-
7.	Total	1,336	1,604	-	942	3,882

Calculation of the Spinning Reserve Reduction

(MW)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RDLC	Non-coincident												
	Coincident	(a)	0	0.3	0.5	0.8	1.2	1.5	1.8	2.0	2.3	2.6	3.2
CIDLC	Non-coincident	(b)	0	0.3	0.5	0.8	0.2	0.5	0.2	0.9	2.3	2.6	3.2
	Coincident	(c)	0	0	0	0	1.8	1.8	2.3	2.9	3.4	3.9	5.0
Rider I	Existing Contracts	(d)	0	0	0	0	1.8	1.8	2.3	2.8	2.9	3.3	4.2
	New Contracts	(e)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
		(f)	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2
		(g)	4.3	4.6	4.8	5.1	6.3	6.6	8.0	9.2	10.7	11.4	12.9

Notes:

- RDLC non-coincident monthly peak impacts from Energy Services Division (7/1/05).
- RDLC coincident monthly peak impacts calculated using the hourly peak impact profile from the RDLC LFA's received on 2/25/05 from Energy Services Division. The peak hour for each month determined by Strategist.
- CIDLC non-coincident monthly peak impacts from Energy Services Division (7/1/05).
- CIDLC coincident monthly peak impacts calculated using the hourly peak impact profile from the CIDLC LFA's received on 2/25/05 from Energy Services Division. The peak hour for each month determined by Strategist.
- Rider I impacts per May 2005 S&P Forecast. Peaks for all months occur during the PM hours.
- Rider I impacts (new contracts) from Pricing Division. Future contracts assumed to be effective July 1, 2005. The ratio of interruptible MWs to contract MWs from existing Rider I customers was used to estimate the MW interruptible impacts for the new contract customers.
- Spinning Reserve Reduction = RDLC (coincident) + CIDLC (coincident) + Rider I (Existing) + Rider I (New) = (b) + (d) + (e) + (f)

Customers - Based on Billing Loads Used in Rate Case Revenues Calculations

Customers	Interruptible kW	Existing Customers Contract MW	Existing Customers MW interruptible (per May 2005 S&P Forecast)
1	2,350.0		
al J1	3,613.8		
lt PP2	1,619.5 *		
IP1	717.6 **		
IP2	2,470.5		
isting	10,771.4	10.8	
			AM 5.2 PM 4.3
			Factor 0.483 0.399
			(Factor = MW interruptible/Contract MW)
Customers - Eff. 7/1/05			
Customers	Interruptible kW	Future Customers Contract MW	Estimated Future Customers MW interruptible (Calculated using AM/PM factor above)
IS1	574.0		
IP3	1,540.0		
IP4	800.0		
ntial	2,914.0	2.9	
xisting			AM 1.4 PM 1.2
ariff			

otible kW reflects adjustment for 250 kW firm load.
iptible kW reflects adjustment for 500 kW firm load.

ustomer Names Refer to Docket No. 04-0113 References
WP-304

Calculation of the Coincidence Factors for the RDLC and CIDLC Programs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Seasonal Peak Hour (Strategist)	43	43	19	19	37	38	13	39	43	19	19	43
Equivalent peak hour	19	19	19	19	13	14	13	15	19	19	19	19
Coincidence factor RDLC	1	1	1	1	0.136	0.322	0.136	0.433	1	1	1	1
CIDLC	0.856	0.856	0.856	0.856	0.997	1	0.997	0.99	0.856	0.856	0.856	0.856

Notes:

- Seasonal Peak Hour (Strategist): The hour in which a company's seasonal peak demand occurs. (Hr 1 - Hr 168, 7 day profile)
- Equivalent peak hour. Hour to look up in RDLC and CIDLC hourly profiles given that each weekday has identical profiles
- RDLC coincidence factor determined using the peak hour of the month (from Strategist) and the hourly profile from the RDLC 010405.lfa from Energy Services (received on 2/25/05)
- CIDLC coincidence factor determined using the peak hour of the month (from Strategist) and the hourly profile from the CILM 010405.lfa from Energy Services (received on 2/25/05)

LIST
COMM rdc 010405.lla
COMM 04/29/2004 Created file for Residential Direct Load Control Program
COMM 05/05/2004 Changed Load Group Assignment
COMM 05/07/2004 Changed Data Span to 2006-2045, Start Year to 2006
COMM 12/01/2004 Updated Short-Term Forecast
COMM 01/04/2005 Updated for Adequacy of Supply Report
COMM 01/26/2005 Corrected to add LGR2 Card
COMM 02/25/2005 Renamed Ramp Up Profile Reference
COMM
COMM ** DLC WATER HEATER PROGRAM INFORMATION **
COMM ** DEVELOPED IN CONJUNCTION WITH DAVID BOYD IN OCT 96 **
COMM
COMM
COMM LGRP RECORD
COMM A: GROUP NUMBER
COMM B: NAME
COMM C: CLASS NUMBER
COMM D: TYPE SWITCH (TYPE (5) REFERS TO DLC PROGRAMS)
COMM E: DATA START YEAR
COMM F: ESCALATION REFERENCE
COMM G: ESCALATION OPTION
COMM H: PROGRAM TYPE
COMM I: DSM LOAD BASIS
COMM J: DLC DATA SET REFER
COMM K: PENETRATION FACTOR OPTION (C = CUMULATIVE, I = INCREMENTAL)
COMM L: UNIT SIZE (LARGE \$,000, GWH, AND MW
COMM MEDIUM \$, MWH, AND KW
COMM SMALL \$, KWH, AND W)
COMM
COMM
COMM A-B-----B CC D E-E F-----F GG H-I J-----J K L-----L
LGRP 15 RDLC V04 5 5 2005 3 RDLC IRP I MEDIUM
COMM
COMM GRUN - GROUP SEASONAL RAMP UP PROFILE NAME
COMM A: SEASONAL RAMP UP PROFILE NUMBER
COMM B: SEASONAL RAMP UP PROFILE NAME
COMM A-A B-----B
GRUN 3 DEFAULT3
COMM
COMM RAMP - SEASONAL RAMP UP PROFILES
COMM A: SEASONAL RAMP UP PROFILE NUMBER
COMM B: SEASON
COMM C: SEASONAL RAMP UP PROFILE
COMM A-A BBC-----C BBC-----C BBC-----C BBC-----C
RAMP03 3 1.08493 2.07671 3.08493 4.08219 5.08493 6.08219
RAMP03 3 7.08493 8.08493 9.08219 10.08493 11.08219 12.08493
RAMP05 3 1.08493 2.07671 3.08493 4.08219 5.08493 6.08219
RAMP05 3 7.08493 8.08493 9.08219 10.08493 11.08219 12.08493
COMM
COMM LGR2 - GROUP RAMP UP PROFILE REFERENCE
COMM A: GROUP NUMBER
COMM B: SEASONAL RAMP UP REFERENCE
COMM A-A B-----B

LGR2 15 DEFAULT3

COMM

COMM GRYR RECORD

COMM A: YEAR

COMM B: GROUP NUMBER

COMM C: LOAD SHAPE POINTER

COMM D: ENERGY SALES

COMM E: PEAK

COMM F: PENETRATION FACTOR

COMM G: PROGRAM STARTS

COMM H: FREE RIDERS PERCENTAGE

COMM I: NEW PARTICIPANT CUSTOMER BENEFIT

COMM

COMMAB-BC-CD-----D E-----EF-----F G-----G H--H I-----I

GRYR03 15 32 1.000000 0.6040 0.0 0 0.0 0.0000

GRYR05 15 5000.6 1 0.0

GRYR06 15 9980.3 0

GRYR07 15 6496.5

GRYR08 15 4103.0

GRYR09 15 251.7

GRYR10 15 251.7

GRYR11 15 251.7

GRYR12 15 251.7

GRYR13 15 251.7

GRYR14 15 251.7

GRYR15 15 251.7

GRYR16 15 251.7

GRYR17 15 251.7

GRYR18 15 251.7

GRYR19 15 251.7

GRYR20 15 251.7

GRYR21 15 251.7

GRYR22 15 251.7

GRYR23 15 251.7

GRYR24 15 251.7

GRYR25 15 251.7

COMM

COMM GRSL RECORD

COMM A: YEAR

COMM B: GROUP NUMBER

COMM C: SEASON

COMM D: SEASONAL PEAK AT METER

COMM E: SEASON ENERGY SALES

COMM

COMMAB-B CCD-----D E-----E CCD-----D E-----E CCD-----D E-----E

GRSL03 15 11.00000.000000 21.00000.000000 31.00000.000000 41.00000.000000

GRSL03 15 51.00000.000000 61.00000.000000 71.00000.000000 81.00000.000000

GRSL03 15 91.00000.000000 101.00000.000000 111.00000.000000 121.00000.000000

COMM

COMM LOSS RECORD

COMM A: YEAR

COMM B: LOAD GROUP

COMM C: SEASON

COMM D: SEASONAL LOSS PERCENT
COMM
COMMAAB-B CCD----D CCD----D CCD----D CCD----D CCD----D
LOSS03 15 14.864 24.864 34.864 44.864 54.864 64.864
LOSS03 15 74.864 84.864 94.864 104.864 114.864 124.864
COMM
COMM GRY1 RECORD
COMM A: YEAR
COMM B: LOAD GROUP C: FIXED CUSTOMER COST D: FIXED DSM EXPENSE
COMM E: NEW PARTICIPANTS CUST. COST F: NEW PARTICIPANTS EXPENSE
COMM G: VARIABLE CUSTOMER COST H: VARIABLE DSM EXPENSE
COMM
COMMAAB-B C-----CD-----DE-----EF-----FG-----GH-----H
GRY103 15 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
GRY105 15 1974.5078 0.0000
GRY106 15 2056.4107 0.0000
GRY107 15 3201.7379 0.0000
GRY108 15 2384.8631 0.0000
GRY109 15 770.7489 0.0000
GRY110 15 530.5331 301.8164
GRY111 15 541.0911 301.8164
GRY112 15 552.0603 301.8164
GRY113 15 563.4260 301.8164
GRY114 15 575.2339 301.8164
GRY115 15 587.4906 301.8164
GRY116 15 600.2130 301.8164
GRY117 15 613.4189 301.8164
GRY118 15 627.1265 301.8164
GRY119 15 641.3551 301.8164
GRY120 15 656.1244 301.8164
GRY121 15 671.4549 301.8164
GRY122 15 687.3679 301.8164
GRY123 15 703.8857 301.8164
GRY124 15 721.0311 301.8164
GRY125 15 738.8280 301.8164
COMM
COMM GRY2 RECORD
COMM A: YEAR
COMM B: LOAD GROUP
COMM C: NEW PARTICIPANTS INCENTIVE
COMM D: VARIABLE INCENTIVES
COMM
COMMAAB-B C-----CD-----D
GRY203 15 0.0000 0.0 0.0000 0.0000 0.0000 0.0000 0.0000
GRY205 15 65.1
GRY206 15 34.7
GRY207 15 48.5
GRY208 15 43.2
GRY209 15 39.5
GRY210 15 39.5
GRY211 15 39.5
GRY212 15 39.5
GRY213 15 39.5


```

COMM .....
COMM .....
COMM .....
COMM ..... DLCD RECORD .....
COMM .....
COMM .....
COMM A: DIRECT LOAD CONTROL DATASET NUMBER
COMM B: NAME
COMM C: SPINNING CONTRIBUTION
COMM D: COMMITMENT CONTRIBUTION
COMM AA B-----B C---C D
DLCD 2 RDLCL IRP 100.0
COMM .....
COMM .....
COMM ..... DCPM ECORD .....
COMM .....

```

COMM A: DIRECT LOAD CONTROL DATASET NUMBER
COMM B: HOUR
COMM C: HOURLY PAYBACK MULTIPLIER
COMM
COMM AA BB C--C BB C--C BB C--C BB C--C BB C--C BB C--C BB C--C
DCPM 2 1 1.00 2 1.00 3 1.00 4 1.00 5 1.00 6 1.00 7 1.00 8 1.00
DCPM 2 9 1.00 10 1.00 11 1.00 12 1.00 13 1.00 14 1.00 15 1.00 16 1.00
DCPM 2 17 1.00 18 1.00 19 1.00 20 1.00 21 1.00 22 1.00 23 1.00 24 1.00
COMM
COMM DCYR RECORD
COMM
COMM A: YEAR
COMM B: DIRECT LOAD CONTROL DATASET NUMBER
COMM C: MINIMUM SAVING (\$/MWH)
COMM D: SOCIETAL COST(INCONVENIENCE) (\$/MWH)
COMM E: VAR ENERGY COST
COMM F: MAX CONTROL ACTIONS PER DAY
COMM G: MAX CONTROL ACTIONS PER YEAR
COMM H: MAX CONTROL HOURS PER DAY
COMM I: MAX CONTROL HOURS PER YEAR
COMM J: MAX DURATION PROGRAM BLOCK (HOURS)
COMM K: PAYBACK DEGRADATION FACTOR
COMM L: MAX DEMAND FOR PAYBACK
COMM M: MAX CONTROLLABLE DEMAND (Default is 1.0)
COMM
COMMAA BB C--C D--D E--E FF G--G HH I--I JJ K--K L--L M--M
DCYR03 2 30. 30 4 0.90 3.00
COMM
COMM DCY2 RECORD
COMM
COMM A: YEAR
COMM B: DIRECT LOAD CONTROL DATASET NUMBER C: NUMBER OF BLOCKS REPRESENTED
COMM D: PERCENT FIRM
COMM
COMMAA BB C--C D--D
DCY203 2 5 100
COMM
COMM GTDS RECORD
COMM A: YEAR
COMM B: LOAD GROUP
COMM C: SEASON
COMM D: SEASONAL T&D DEMAND CREDIT
COMM E: SEASONAL T&D ENERGY CREDIT
COMM F: SEASONAL CHANGE IN PEAK FRACTION
COMM
COMMAAB-B CC D--DE--EF--F CC D--DE--EF--F CC D--DE--EF--F
GTDS03 15 1 0.0000.0 2 0.0000.0 3 0.0000.0 4 0.0000.0
GTDS03 15 5 0.0000.0 6 0.0000.0 7 0.0000.0 8 0.0000.0
GTDS03 15 9 0.0000.0 10 0.0000.0 11 0.0000.0 12 0.0000.0
COMM

ed file for C&I Load Management Program
ged Load Group Assignment
ged Data Span to 2006-2045, Data Start Year to 2006
ed Short-Term Forecast
ed for Adequacy of Supply Report
cted to add LGR2 Card
med Ramp Up Profile Reference

LOAD MANAGEMENT PROGRAM INFORMATION **

ER
ER
EAR
REFERENCE
PTION
DE
IS
REFER
FACTOR OPTION (C = CUMULATIVE, I = INCREMENTAL)
IGE \$,000, GWH, AND MW
\$, MWH, AND KW
\$, KWH, AND W)
E-E F---F GG H-I J---J K L---L
2005 1 CILM IRP I MEDIUM
SEASONAL RAMP UP PROFILE NAME
MP UP PROFILE NUMBER
MP UP PROFILE NAME
AL RAMP UP PROFILES
MP UP PROFILE NUMBER
MP UP PROFILE
---C BBC---C BBC---C BBC---C
671 3.08493 4.08219 5.08493 6.08219
493 9.08219 10.08493 11.08219 12.08493
671 3.08493 4.08219 5.08493 6.08219
493 9.08219 10.08493 11.08219 12.08493
AMP UP PROFILE REFERENCE
ER
MP UP REFERENCE
}

COMM GRYR RECORD

COMM A: YEAR

COMM B: GROUP NUMBER

COMM C: LOAD SHAPE POINTER

COMM D: ENERGY SALES

COMM E: PEAK

COMM F: PENETRATION FACTOR

COMM G: PROGRAM STARTS

COMM H: FREE RIDERS PERCENTAGE

COMM

COMMAAB-BC-CD---D E---EF---FG---GH---H
GRYR03 20-200 1.000000 350.0 0.0 0 0.0 0.0000

GRYR05 20 13.5 1

GRYR06 20 16.5 0

GRYR07 20 15.0

GRYR08 20 15.0

GRYR09 20 0.0

GRYR10 20 0.0

GRYR11 20 0.0

GRYR12 20 0.0

GRYR13 20 0.0

GRYR14 20 0.0

GRYR15 20 0.0

GRYR16 20 0.0

GRYR17 20 0.0

GRYR18 20 0.0

GRYR19 20 0.0

GRYR20 20 0.0

GRYR21 20 0.0

GRYR22 20 0.0

GRYR23 20 0.0

GRYR24 20 0.0

GRYR25 20 0.0

COMM

COMM GRSL RECORD

COMM A: YEAR

COMM B: GROUP NUMBER

COMM C: SEASON

COMM D: SEASONAL PEAK AT METER

COMM E: SEASON ENERGY SALES

COMM

COMMAAB-B CCD---D E---E CCD---DE---E CCD---DE---E
GRSL03 20 11.00000.000000 21.00000.000000 31.00000.000000 41.00000.000000
GRSL03 20 51.00000.000000 61.00000.000000 71.00000.000000 81.00000.000000
GRSL03 20 91.00000.000000 101.00000.000000 111.00000.000000 121.00000.000000

COMM

COMM LOSS RECORD

COMM A: YEAR

COMM B: LOAD GROUP

COMM C: SEASON

COMM D: SEASONAL LOSS PERCENT

COMM

COMMAAB-B CCD---D CCD---D CCD---D CCD---D CCD---D
LOSS03 20 1 4.864 2 4.864 3 4.864 4 4.864 5 4.864 6 4.864

LOSS03 20 7 4.864 8 4.864 9 4.864 10 4.864 11 4.864 12 4.864
COMM
COMM GTDS RECORD
COMM A: YEAR
COMM B: LOAD GROUP
COMM C: SEASON
COMM D: SEASONAL T&D DEMAND CREDIT
COMM E: SEASONAL T&D ENERGY CREDIT
COMM F: SEASONAL CHANGE IN PEAK FRACTION
COMM
COMMAAB-B CC D-DE-EF-F CC D-DE-EF-F CC D-DE-EF-F CC D-DE-EF-F
GTDS03 20 1 0.00000 2 0.00000 3 0.00000 4 0.00000
GTDS03 20 5 0.00000 6 0.00000 7 0.00000 8 0.00000
GTDS03 20 9 0.00000 10 0.00000 11 0.00000 12 0.00000
COMM
COMM GRY1 RECORD
COMM A: YEAR
COMM B: LOAD GROUP C: FIXED CUSTOMER COST D: FIXED DSM EXPENSE
COMM E: NEW PARTICIPANTS CUST. COST F: NEW PARTICIPANTS EXPENSE
COMM G: VARIABLE CUSTOMER COST H: VARIABLE DSM EXPENSE
COMM
COMMAAB-B C-----CD-----DE-----EF-----FG-----GH-----H
GRY103 20 0.0000 0.000 7540.0 0.000 0.0000 0.0000 0.0000
GRY105 20 228.141 0.000 0.000
GRY106 20 427.970 0.000 0.000
GRY107 20 716.647 0.000 0.000
GRY108 20 766.795 0.000 0.000
GRY109 20 411.485 0.000 0.000
GRY110 20 404.175 0.000 175.602
GRY111 20 410.794 0.000 175.602
GRY112 20 417.664 0.000 175.602
GRY113 20 424.795 0.000 175.602
GRY114 20 432.197 0.000 175.602
GRY115 20 439.860 0.000 175.602
GRY116 20 447.855 0.000 175.602
GRY117 20 456.134 0.000 175.602
GRY118 20 464.727 0.000 175.602
GRY119 20 473.646 0.000 175.602
GRY120 20 482.905 0.000 175.602
GRY121 20 492.515 0.000 175.602
GRY122 20 502.490 0.000 175.602
GRY123 20 497.463 0.000 175.602
GRY124 20 507.626 0.000 175.602
GRY125 20 518.176 0.000 175.602
COMM
COMM GRY2 RECORD
COMM YR: YEAR
COMM A: LOAD GROUP
COMM B: NEW PARTICIPANTS INCENTIVE
COMM C: VARIABLE INCENTIVES (ONGOING PAYMENTS MADE YEARLY TO PLAN PARTICIPANTS)
COMM D: NEW PARTICIPANTS EXTERNAL COST
COMM E: VARIABLE EXTERNAL COST
COMM F: T & D DEMAND CREDIT
COMM

IDE

GRY323 20	0.0
GRY324 20	0.0
GRY325 20	0.0
COMM	
COMM GRY4 RECORD	
COMM A: YEAR B: GROUP NUMBER C: FIXED EVALUATION EXPENSE (000\$)	
COMM D: NEW PARTICIPANT EVALUATION EXPENSE	
COMM E: VARIABLE EVALUATION EXPENSE (\$ UN/PEN) D: FREE RIDERS PERCENTAGE	
COMM F: SPINNING RESERVE CONTRIBUTION G: LOAD SHAPE FILE	
COMM	
COMM AAB-B C-----CD-----DE-----E F--F G--G	
GRY403 20	0.000 0.000 0.0000 0.0000 0.0000
GRY406 20	219.503
GRY407 20	219.503
GRY408 20	219.503
GRY409 20	219.503
GRY410 20	219.503
GRY411 20	219.503
GRY412 20	219.503
GRY413 20	219.503
GRY414 20	219.503
GRY415 20	219.503
GRY416 20	219.503
GRY417 20	219.503
GRY418 20	219.503
GRY419 20	219.503
GRY420 20	219.503
GRY421 20	219.503
GRY422 20	219.503
GRY423 20	219.503
GRY424 20	219.503
GRY425 20	219.503
COMM	
COMM TDY1 RECORD	
COMM A: DATA GROUP B: SEASON C: DAILY LOAD SHAPE POINTER (Mon-Sun)	
COMM	
COMM 1 2 3 4 5 6 7	
COMM A-ABBC-C C-C C-C C-C C-C C-C	
TDY1200 1870	870 870 870 870 870 871 871
TDY1200 2870	870 870 870 870 870 871 871
TDY1200 3870	870 870 870 870 870 871 871
TDY1200 4870	870 870 870 870 870 871 871
TDY1200 5870	870 870 870 870 870 871 871
TDY1200 6870	870 870 870 870 870 871 871
TDY1200 7870	870 870 870 870 870 871 871
TDY1200 8870	870 870 870 870 870 871 871
TDY1200 9870	870 870 870 870 870 871 871
TDY120010870	870 870 870 870 870 871 871
TDY120011870	870 870 870 870 870 871 871
TDY120012870	870 870 870 870 870 871 871
COMM	
COMM DSH1 AND DSH2 RECORDS	
COMM A: DAILY SHAPE B: HOURLY VALUES (DSH1: 1-12, DSH2 13:24)	
COMM	

COMM 1 2 3 4 5 6 7 8
COMMA-A B--BB--BB--BB--BB--BB--BB--BB--BB--BB--B
COMM
COMM ** LOAD SHAPES ARE DERIVED FROM THE HICKAM AFB AND PEARL HARBOR COMBINED
COMM SHAPES PER C:\DATA\HECO\FINANC\UGIONS\ITLD.XLS
COMM
COMM ** WEEKDAY SHAPE
COMM
COMM Hⁱ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
DSH1870 44.97 44.2 43.73 43.53 44.22 48.16 55.39 59.29 61.62 63.09 63.74 63.87 64.75 64.94 64.27 61.75 58.15 56.47 55.6 55.69 54.85 53.06 50.11 47.17
0.692 0.681 0.673 0.670 0.681 0.742 0.853 0.913 0.949 0.972 0.982 0.984 0.997 1.000 0.990 0.951 0.895 0.870 0.856 0.845 0.817 0.772 0.726
COMM
COMM HOUR ENDING:
DSH2870
COMM
COMM ** APE
COMM
COMM Hⁱ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
DSH1871 46.82 45.76 45.07 44.77 44.7 44.7 45.28 46.27 48.38 51 53.1 54.38 55 55.49 55.24 54.94 54.54 54.41 54.4 54.69 55.26 54.56 53.01 50.83 48.4
COMM
COMM HOUR ENDING:
DSH2871
COMM
COMM ***** DLCD RECORD *****
COMM
COMM
COMM
COMM AA: DIRECT LOAD CONTROL DATASET NUMBER
COMM BB: NAME
COMM CC: SPINNING CONTRIBUTION
COMM DD: COMMITMENT CONTRIBUTION
COMM
COMM AA B---B C--C D
DLCD 1 CILM IRP 100.0
COMM
COMM ***** DCPM ECORD *****
COMM
COMM
COMM A: DIRECT LOAD CONTROL DATASET NUMBER
COMM B: HOUR
COMM C: HOURLY PAYBACK MULTIPLIER
COMM
COMM AA BB C--C BB C--C BB C--C BB C--C BB C--C BB C--C
COMM
DCPM 1 1 0.00 2 0.00 3 0.00 4 0.00 5 0.00 6 0.00 7 0.00 8 0.00
DCPM 1 9 0.00 10 0.00 11 0.00 12 0.00 13 0.00 14 0.00 15 0.00 16 0.00
DCPM 1 17 0.00 18 0.00 19 0.00 20 0.00 21 0.00 22 0.00 23 0.00 24 0.00
COMM
COMM ***** DCYR RECORD *****
COMM
COMM
COMM A: YEAR
COMM B: DIRECT LOAD CONTROL DATASET NUMBER
COMM C: MINIMUM SAVING (\$/MWH)

COMM D: SOCIETAL COST(INCONVENIENCE) (\$/MWH)
COMM E: VAR ENERGY COST
COMM F: MAX CONTROL ACTIONS PER DAY
COMM G: MAX CONTROL ACTIONS PER YEAR
COMM H: MAX CONTROL HOURS PER DAY
COMM I: MAX CONTROL HOURS PER YEAR
COMM J: MAX DURATION PROGRAM BLOCK (HOURS)
COMM K: PAYBACK DEGRADATION FACTOR
COMM L: MAX DEMAND FOR PAYBACK
COMM M: MAX CONTROLLABLE DEMAND (Default is 1.0)
COMM
COMMAA BB C--D E--E FF G--G HH I--JJ K--K L--L M--M
DCYR03 1 25 24 300 12 1.00 1.00
COMM *****
COMM ***** DCY2 RECORD *****
COMM *****
COMM *****
COMM A: YEAR
COMM B: DIRECT LOAD CONTROL DATASET NUMBER C: NUMBER OF BLOCKS REPRESENTED
COMM D: PERCENT FIRM
COMM
COMMAA BB C--C D--D
DCY203 1 5 100

AL FACILITY

I (Non-fuel) e Min Purch Above Min Purch MW	O&M (Non-fuel) MW	Capacity Up to 180 MW	Capacity Over 180 MW	Total Expense
\$0	\$0	\$2,465,250	\$270,667	\$15,230,589
\$313,537	\$58,193	\$2,465,250	\$270,667	\$13,928,958
\$98,752	\$267,449	\$2,465,250	\$270,667	\$11,956,930
		\$2,465,250	\$270,667	\$9,223,565
		\$2,465,250	\$270,667	\$13,672,031
		\$2,465,250	\$270,667	\$15,097,910
		\$2,465,250	\$270,667	\$15,295,133
		\$2,465,250	\$270,667	\$15,534,202
		\$2,465,250	\$270,667	\$15,102,097
		\$2,465,250	\$270,667	\$15,024,167
		\$2,465,250	\$270,667	\$15,243,330

\$412,289 \$325,842 \$29,583,000 \$3,248,000 \$170,353,253

Total Shortfall
Cost

\$0

Total Expense \$170,353,253

n the

calculated from

* 1000 * K * (E10 / E9), where column K values are the monthly MWH,
xant is used instead of the monthly MWH.
y (working backwards from May, the last month of the contract year).
1000 * B * R * (E10 / E9), where column R values are the monthly MWH
energy (MWH) into < 180 MW and >= 180 MW is based on production
summed to occur in March, April, and May (working backwards from May,
1000 * B * S * (E10 / E9), where column S values are the monthly MWH
energy (MWH) into < 180 MW and >= 180 MW is based on production
summed to occur in March, April, and May (working backwards from May,

Kalaeloa 2005 Rate Case Test Year Forecasted Expenses 7/2/2005 Production Simulation

Assumptions: See SUMMARY sheet

AVAILABILITY DATA				ONE CT ENERGY				TWO CT ENERGY			
Calendar Days	Planned Maintenance Ehrs Out	Forced Outage Ehrs Out	Base Fuel Comp. cents/kWh	Total Energy cents/kWh	Fuel Only No additive	Additive Only	Total fuel	Base Fuel Comp. cents/kWh	Total Energy cents/kWh	Fuel Only No additive	Additive Only
31	0	7.44	3.211394	8.658843	\$912,146	\$13,657	\$925,803	2.770000	7.486274	\$9,437,107	\$163,815
28	0	6.72	3.211394	8.658843	\$729,717	\$10,926	\$740,643	2.770000	7.486274	\$8,539,321	\$148,230
31	204	5.40	3.211394	8.658843	\$1,733,078	\$25,949	\$1,759,027	2.770000	7.486274	\$5,929,895	\$102,935
30	300	4.20	3.211394	8.658843	\$4,226,277	\$63,279	\$4,289,556	2.770000	7.486274	\$1,768,681	\$30,700
31	0	7.44	3.211394	8.658843	\$760,122	\$11,381	\$771,503	2.770000	7.486274	\$9,631,226	\$167,184
30	0	7.20	3.211394	8.658843	\$729,717	\$10,926	\$740,643	2.770000	7.486274	\$9,497,256	\$164,859
31	0	7.44	3.211394	8.658843	\$912,146	\$13,657	\$925,803	2.770000	7.486274	\$9,490,457	\$164,741
31	0	7.44	3.211394	8.658843	\$729,717	\$10,926	\$740,643	2.770000	7.486274	\$9,866,140	\$171,262
30	0	7.20	3.211394	8.658843	\$760,122	\$11,381	\$771,503	2.770000	7.486274	\$9,439,830	\$163,862
31	24	7.20	3.211394	8.658843	\$1,064,171	\$15,934	\$1,080,104	2.770000	7.486274	\$9,182,502	\$159,395
30	0	7.20	3.211394	8.658843	\$729,717	\$10,926	\$740,643	2.770000	7.486274	\$9,444,569	\$163,944
31	0	7.44	3.211394	8.658843	\$851,336	\$12,747	\$864,083	2.770000	7.486274	\$9,506,959	\$165,028
365	528	82.32			\$14,138,266	\$211,688	\$14,349,954			\$101,733,883	\$1,765,956
											\$103,499,839

RCES AND NOTES: See SUMMARY sheet and below

letter grid across the top of the page for the column address and the line the left side for the row number. General reference to a column without a row means to use the data for the corresponding month. Otherwise a reference is in () next to the column designation. Calculation on one sheet of paper may draw on data from another sheet. Elements of a formula that data from another sheet are preceded by an "A." if the data are from the SUMMARY sheet by a "B." if the data are from the BACKUP sheet.

Interruption Equivalent Hours (Ehrs) Out in col D is based on the HECO planned maintenance schedule for the Rate Case Test Year dated 1/12/04. The schedule is 320 to 326 - 7 days of 90 MW loss to the HECO system; 327 to 412 - 7 days of 180 MW loss to the HECO system; 413 to 423 - 21 days of 90 MW loss to the HECO system; 10/15 and 10/22 each - 1 day of 90 MW loss to the HECO system.

Outage Equivalent Hours (Ehrs) Out in col E is calculated from A.E(8) * ((C * 24) - D).
 Fuel Component in cents per kWh in col F is calculated from the one CT operation formula in the Kalaeloa PPA, p50. The load data are from A.E.
 Actual / LSFO Base Fuel Price (A.E(12) / A.E(11)) * 100 * A.N(9) / A.N(8).
 Actual / LSFO Base Fuel Price (A.E(12) / A.E(11)) * 100 * A.N(9) / A.N(8).
 No Additive cost in col H is calculated from (A.C * 1000 / 100) * F * A.E(12) / A.E(11).
 Only cost in col I is calculated from A.C * 1000 * A.N(10) * A.N(9) / A.N(8).
 Only cost in col J is calculated from H + I.

Component in cents per kWh in col K is calculated from the two CT operation formula in the Kalaeloa PPA, Amendment 2, p2. The load data are from A.H.
 Actual / LSFO Base Fuel Price (A.E(12) / A.E(11)) * 100 * A.N(10) * A.N(9) / A.N(8).
 Actual / LSFO Base Fuel Price (A.E(12) / A.E(11)) * 100 * A.N(10) * A.N(9) / A.N(8).
 No Additive cost in col M is calculated from (A.F * 1000 / 100) * K * A.E(12) / A.E(11).
 Only cost in col N is calculated from A.F * 1000 * A.N(10) * A.N(9) / A.N(8).
 Only cost in col O is calculated from M + N.

ough 48 refer to the Shortfall Calculation
 Annual Purchase in GWh is calculated from 1235 * (minimum of 92% / 85% or A.J(36) / 85%).
 Annual Purchase in GWh is from A.K(36) / 1000.
 In GWh is calculated from N(40) * N(41).
 Shortfall Cost is calculated from the absolute value of (A.J(10) * N(42) * 1000000 * A.E(10) / A.E(9)). If N(42) is <= zero, the calculation yields zero.
 Shortfall Cost is calculated from the absolute value of (A.N(11) * N(42) * 1000000). If N(42) is <= zero, the calculation yields zero.
 Shortfall Cost is calculated from N(44) * N(46).

a for the Above Minimum Purchase box categorized by < 180 MW and >= 180 MW are from the HECO 2005 Operations/Budget Production Simulation dtd 07/02/05. The monthly totals may differ from respective cells in A.K due to minor roundoffs.

ABOVE MINIMUM PURCHASE			
	211,548 MWH	139,795 MWH	May 2005
	71,753 MWH		Part of April 2005
Energy (MWH-Energy (MWH))			
at < 180 MW	13,944	125,881	139,825
at >= 180 MW			
May			
May subtotal	13,944	125,881	139,825
April 4 to 30			
April 3 partial	44,005	27,390	71,395
April subtotal	44,272	27,390	71,662
March	0	0	0
March subtotal	0	0	0
Above minimum purchase starts in the hour after the minimum purchase is exceeded such that the total may not exactly match shortfall calculation.			
Total	55,216	153,271	211,487

SHORTFALL CALCULATION			
Adjusted Min Purch.	1,336,706 GWh		
Actual Annual Purchase	1,548,254 GWh		
Shortfall	(211,548) GWh		
O&M Base Shortfall Cost	\$0		
Fuel Shortfall Cost	\$0		
Total Shortfall Cost	\$0		

Assumptions:

Forced Outage Rate	1.00%	3rd Q 2004 GNP/ID	108,479
Base GNP/ID	72,465	1st Q 2005 GNP/ID	109,872
Capacity-\$/KWh available	\$0.044095	Fixed O&M-\$/KWh available	\$0.011
Variable O&M-\$/KWh purchased	\$0.0005		

TOTAL FACILITY														
ONE BOILER				TWO BOILERS				EAF CALCULATION		TOTAL FACILITY				
	net MWh	Op Hrs	Avg kW	net MWh	Op Hrs	Avg kW	Monthly EAF	YTD EAF	Energy MWh	Fuel	Variable O&M	Fixed O&M	Capacity	Total Expense
Jan	0	0	0.000	132,581	737	180,000	99.00%	99.00%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Feb	0	0	0.000	119,750	665	179,999	99.00%	99.00%	119,750	\$3,029,555	\$89,632	\$1,971,910	\$5,280,394	\$10,371,490
Mar	0	0	0.000	132,581	737	180,000	99.00%	99.00%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Apr	0	0	0.000	128,304	713	180,000	99.00%	99.00%	128,304	\$3,245,963	\$96,035	\$2,112,760	\$5,657,565	\$11,112,323
May	0	0	0.000	132,581	737	180,000	99.00%	99.00%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Jun	0	0	0.000	128,304	713	180,000	99.00%	99.00%	128,304	\$3,245,963	\$96,035	\$2,112,760	\$5,657,565	\$11,112,323
Jul	0	0	0.000	132,581	737	180,000	99.00%	99.00%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Aug	0	0	0.000	132,581	737	180,000	99.00%	99.00%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Sep	29,938	333	90.000	68,429	360	180,002	75.90%	96.48%	96,367	\$2,564,570	\$74,572	\$1,640,563	\$4,337,466	\$8,617,192
Oct	0	0	0.000	132,581	737	180,000	99.00%	96.72%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Nov	0	0	0.000	128,304	713	180,000	99.00%	96.93%	128,304	\$3,245,963	\$96,035	\$2,112,760	\$5,657,565	\$11,112,323
Dec	0	0	0.000	132,581	737	180,000	99.00%	97.10%	132,581	\$3,354,167	\$99,236	\$2,183,186	\$5,846,150	\$11,482,739
Total	29,938	333	90.000	1,501,158	8,340	180,000	97.10%	97.10%	1,531,096	\$39,025,151	\$1,153,290	\$25,372,344	\$67,513,608	\$133,064,392

DATA SOURCES AND NOTES:

Refer to the letter grid across the top of the page for the column address and the line number on the left side for the row number. General reference to a column without reference to a row means to use the data for the corresponding month. Otherwise a specific row reference is in () next to the column designation. Calculation on one sheet of the spreadsheet may draw on data from another sheet. Elements of a formula that reference data from another sheet are preceded by an "A," if the data are from the SUMMARY sheet and preceded by a "B," if the data are from the BACKUP sheet.

- | | |
|-----|--|
| 1. | Forced Outage Rate in cell F(9) is based on approximate actual performance. |
| 2. | Base GNPIPd in cell F(10) is the GNPIPd value for the 1st Quarter of 1987 per the AES-Hawaii PPA, Amendment 1, Exhibit 5, p14. Actual value will be from the same Bureau of Economic Analysis publication as the actual current GNPIPd (numerator in GNPIPd adjustment factor), per the May 3, 2001 letter agreement. For now, a recent 1Q1987 GNPIPd value is used for the Base GNPIPd. |
| 3. | Capacity cost per available kWh in cell F(11) is based on AES Hawaii PPA, Amendment 1 dated May 8, 2003, p. 2. |
| 4. | Variable O&M cost per kWh purchased in cell F(12) is based on AES-Hawaii PPA, Amendment 1, p7. |
| 5. | 3rd Q 2004 GNPIPd in cell K(9) is the actual final value released by BEA on 12/22/2004. |
| 6. | 1st Q 2005 GNPIPd in cell K(10) is the actual final value released by BEA on 06/29/05. |
| 7. | Fixed O&M cost per available kWh in cell K(11) is based on AES-Hawaii PPA, Amendment 1, p7. |
| 8. | The net MWhs and Op Hrs in columns C and D, respectively and columns F and G, respectively are from the HECO 2005 Operational/Budget Production Simulation dtd 7/02/05. |
| 9. | The Avg MWh in col E is calculated from C/D. The Avg MWh in col H is calculated from F/G. |
| 10. | The Monthly EAF in col I is calculated from ((B.C * 24) - B.D - B.E) / (B.C * 24). |
| 11. | The YTD EAF in col J is calculated as follows. The first month is from I. Subsequent months are calculated from J (from previous month) * (sum B C (existing and previous months) * 24) + (I * B.C * 24) / (sum B C (existing and previous months) * 24). |
| 12. | The Energy MWh in col K is calculated from C + F. |
| 13. | The Fuel cost in col L is calculated from ((B.J * B.G * F) + (B.H * B.G * C)) * 1000 / 100. |
| 14. | The Variable O&M cost in col M is calculated from F(12) * 1000 * B.G * K. |
| 15. | The Fixed O&M cost in col N is calculated from K(11) * 1000 * B.F * B.G. |
| 16. | The Capacity cost in col O is calculated from F(11) * 1000 * B.F. |
| 17. | The Total Expense in col P is calculated by L + M + N + O. |
| 18. | The Bonus is calculated on the "Bonus" and "Detailed Bonus Calc" sheets. |

HECO-RWP-502
DOCKET NO. 04-0113
PAGE 2 OF 4

Page 2 of 3 (BACKUP sheet)

Workbook Modified: 19-Jul-04
Latest Data Input: 6-Jul-05
Print: 4-Aug-05

AES Hawaii, Inc. 2005 Operational/Budget Forecasted Expenses
7/02/05 Production Simulation Update

Assumptions: See SUMMARY sheet

	AVAILABILITY DATA				GNIPD Ratio	ONE BOILER		TWO BOILERS	
	Calendar Days	Planned Maintenance EHrs Out	Forced Outage EHrs Out	MWh Available		Base Fuel Component cents/kWh	Fuel	Base Fuel Component cents/kWh	Fuel
Jan	31	0	7.44	132,581	1.496985	0.000000	\$0	1.689997	\$3,354,167
Feb	28	0	6.72	119,750	1.496985	0.000000	\$0	1.689997	\$3,029,555
Mar	31	0	7.44	132,581	1.496985	0.000000	\$0	1.689997	\$3,354,167
Apr	30	0	7.20	128,304	1.496985	0.000000	\$0	1.689997	\$3,245,963
May	31	0	7.44	132,581	1.496985	0.000000	\$0	1.689997	\$3,354,167
Jun	30	0	7.20	128,304	1.496985	0.000000	\$0	1.689997	\$3,245,963
Jul	31	0	7.44	132,581	1.516208	0.000000	\$0	1.689997	\$3,397,239
Aug	31	0	7.44	132,581	1.516208	0.000000	\$0	1.689997	\$3,397,239
Sep	30	168	5.52	98,366	1.516208	1.786989	\$811,143	1.689998	\$1,753,427
Oct	31	0	7.44	132,581	1.516208	0.000000	\$0	1.689997	\$3,397,239
Nov	30	0	7.20	128,304	1.516208	0.000000	\$0	1.689997	\$3,287,645
Dec	31	0	7.44	132,581	1.516208	0.000000	\$0	1.689997	\$3,397,239
Total	365	168	85.92	1,531,094			\$811,143		\$38,214,008

DATA SOURCES AND NOTES: See SUMMARY sheet and below

Refer to the letter grid across the top of the page for the column address and the line number on the left side for the row number. General reference to a column without reference to a row means to use the data for the corresponding month. Otherwise a specific row reference is in () next to the column designation. Calculation on one sheet of the spreadsheet may draw on data from another sheet. Elements of a formula that reference data from another sheet are preceded by an "A:" if the data are from the SUMMARY sheet and preceded by a "B:" if the data are from the BACKUP sheet.

19. Planned Maintenance Equivalent Hours (EHrs) Out in col D is based on the Power Supply O & M 2005 Planned Maintenance Schedule revised 01/12/04. The schedule consists of 9/12 to 9/25/2005 - 14 days of 90 MW loss to the HECO system. This is consistent with the AES Hawaii proposed 5-year maintenance schedule dated 6/30/2004.
20. The Forced Outage Equivalent Hours (EHrs) Out in col E is calculated from A:F(9) * ((C * 24) - D).
21. The MWh Available in col F is calculated from 180 * ((C * 24) - D - E).
22. The GNIPD ratio in col G is calculated from A:K(9) / A:F(10) for the months January through June and from A:K(10) / A:F(10) for the months of July through December.
23. The Base Fuel Component in cents per kWh in col H is calculated from the formula in the AES-Hawaii PPA, Amendment 1, p7. The load data are from A:E.

page 3 of 3 (BONUS sheet)

Workbook Modified: 19-Jul-04
Latest Data Input: 6-Jul-05
Print: 4-Aug-05

AES Hawaii, Inc. 2005 Operational/Budget Forecasted Expenses

7/02/05 Production Simulation Update

AES Availability Bonus

Two Year Running Avg.

Equivalent Availability Factor (EAF): 97.59%

Per PPA Section 5.2: Availability bonus = \$15,000 (1987\$) per one tenth of a percentage point over 91%, adjusted in accordance with Section 8.1C

Per PPA Section 8.1C: All dollar values noted in Sections 5.2 and 8.1 will be adjusted each Contract Year in accordance with the following formula:

Bonus Corrected = $((C + U) / (C + E)) \times \text{GNIPD Ratio} \times \text{Liquidated Damage or Bonus (Uncorrected)}$

C = Capacity Charge

E = Escalated Energy Charge

U = Unescalated Energy Charge

GNIPD current (actual 1st Qtr 2005)	109.872
GNIPD base	72.465
GNIPD Adjustment Factor	1.5162
C	4.4095 cents/kWh
U (Fuel equation with 180 MW * EAF as input for plant load + Variable O&M component (0.05 cents/kWh) + Fixed O&M component (1.1 cents/kWh))	2.84 cents/kWh
E (U * (GNIPD current/GNIPD base) ((C+U)/(C+E)))	4.3036 cents/kWh
EAF > 91% (truncated to nearest 0.1%)	0.831840247 6.5%
Bonus uncorrected	\$975,000
Bonus Corrected	\$1,229,705

AES HAWAII, INC. BONUS EQUIVALENT AVAILABILITY CALCULATION

Assumption of forced outage rate for Contract Year 12 = 1.0 percent

(Note: For 2004 payment, C is weighted average per 10/22/2003 letter agreement with AES)

Month	Potential kWh	Available kWh	Monthly Percentage	Contract Year Cumulative Percentage
Contract Year 12				
Oct-03	133,920,000	133,920,000	100.00%	100.00%
Nov-03	129,600,000	129,600,000	100.00%	100.00%
Dec-03	133,920,000	133,920,000	100.00%	100.00%
Jan-04	133,920,000	130,166,067	97.21%	99.30%
Feb-04	125,280,000	125,280,000	100.00%	99.43%
Mar-04	133,920,000	127,353,995	95.09%	98.70%
Apr-04	129,600,000	106,927,726	82.04%	96.35%
May-04	133,920,000	133,920,000	100.00%	96.81%
Jun-04	129,600,000	129,600,000	100.00%	97.16%
Jul-04	133,920,000	133,920,000	100.00%	97.45%
Aug-04	133,920,000	133,306,612	99.54%	97.64%
Sep-04	129,600,000	129,600,000	100.00%	97.84%
Totals	1,581,120,000	1,546,922,420		97.84%

Notes

- Actual data used through September 2004.

TWO YEAR RUNNING AVERAGE EAF FOR CONTRACT YEARS 11 AND 12

97.32%

PPA EAF BONUS THRESHOLD

91.0%

PPA BONUS EAF FACTOR (Truncated to 0.1%)

6.3%

PPA BONUS IN UNCORRECTED DOLLARS (\$1987)

\$945,000.00

PPA BONUS CORRECTED FORMULA

Capacity = C	C in cents/kWh =	4.4720
Uncorrected Energy = U	U in cents / kWh = ((fuel equation with 180 MW*EAF as input) + 1.10 + 0.05) =	2.84
Corrected Energy = E	E = U * GNPIPD Adjustment Factor =	4.19
	GNPIPD Current value assumed (on payment date) =	106.996
GNPIPD adjustment factor =	GNPIPD Adjustment Factor = Current value / 1987 1st Qtr value (72.465) =	1.4765
(C + U) / (C + E) =		0.843877801

PPA BONUS PAYMENT CORRECTED ((C + U)/(C + E)) * GNPIPD adjustment factor * Uncorrected Bonus

\$1,177,456.37

EAF BONUS CONTRACT YEARS 11 AND 12 Payable November, 2004**\$1,177,456.37**

Assumption of forced outage rate for Contract Year 13 = 1.0 percent

Month	Potential kWh	Available kWh	Monthly Percentage	Contract Year Cumulative Percentage
Contract Year 13				
Oct-04	133,920,000	133,920,000	100.00%	100.00%
Nov-04	129,600,000	129,600,000	100.00%	100.00%
Dec-04	133,920,000	133,920,000	100.00%	100.00%
Jan-05	133,920,000	128,825,851	96.05%	99.00%
Feb-05	120,960,000	120,960,000	100.00%	99.19%
Mar-05	133,920,000	133,920,000	100.00%	99.33%
Apr-05	129,600,000	129,600,000	100.00%	99.42%
May-05	133,920,000	132,580,800	99.00%	99.37%
Jun-05	129,600,000	128,304,000	99.00%	99.33%
Jul-05	133,920,000	132,580,800	99.00%	99.29%
Aug-05	133,920,000	132,580,800	99.00%	99.27%
Sep-05	129,600,000	98,366,400	75.90%	97.35%
Totals	1,576,800,000	1,534,958,451		97.35%

Notes

- Actual data used through April 2005.

2. September 2005 has scheduled maintenance of 14 days of 60 MW outage, per the Power Supply G.S. 11-2005 Planned Maintenance Schedule.

Workbook Modified: 8-Jul-02
Latest Data Input: 11-Jul-05
Print: 4-Aug-05

Page 1 of 2 (SUMMARY sheet)

HPOWER 2005 Operational/Budget Forecasted Expenses

07/02/05 Production Simulation Update

Assumptions:

On-Peak, Weekday Availability	90.00%
Capacity Charge	\$0.0489 /kWh available weekday on-peak
Capacity	46,000 kW
On Peak Energy Rate-1st 644 MWh/day	\$0.1082 /kWh purch
On Peak Energy Rate-Excess MWh/day	\$0.1082 /kWh purch
Off Peak Energy Rate-1st 250 MWh/day	\$0.0825 /kWh purch
Off Peak Energy Rate-Excess MWh/day	\$0.0825 /kWh purch

	On-Peak MWh	Off-Peak MWh	Total MWh	Total Energy	Capacity	Total Expenses
Jan	17,968	12,834	30,802	\$3,001,975	\$595,191.24	\$3,597,167
Feb	16,229	11,592	27,821	\$2,711,462	\$566,848.80	\$3,278,310
Mar	9,596	6,854	16,450	\$1,603,205	\$354,280.50	\$1,957,486
Apr	16,358	11,684	28,042	\$2,732,981	\$566,848.80	\$3,299,830
May	17,968	12,834	30,802	\$3,001,975	\$623,533.68	\$3,625,509
Jun	17,388	12,420	29,808	\$2,905,137	\$623,533.68	\$3,528,671
Jul	17,968	12,834	30,802	\$3,001,975	\$595,191.24	\$3,597,167
Aug	17,968	12,834	30,802	\$3,001,975	\$651,876.12	\$3,653,851
Sep	17,388	12,420	29,808	\$2,905,137	\$623,533.68	\$3,528,671
Oct	17,195	12,282	29,477	\$2,872,858	\$581,020.02	\$3,453,878
Nov	16,100	11,500	27,600	\$2,689,942	\$566,848.80	\$3,256,791
Dec	16,164	11,546	27,710	\$2,700,702	\$552,677.58	\$3,253,379
Total	198,288	141,634	339,922	\$33,129,326	\$6,901,384	

Total Expense \$40,030,710

DATA SOURCES AND NOTES:

Refer to the letter grid across the top of the page for the column address and the line number on the left side for the row number. General reference to a column without reference to a row means to use the data for the corresponding month. Otherwise a specific row reference is in () next to the column designation. Calculation on one sheet of the spreadsheet may draw on data from another sheet. Elements of a formula that reference data from another sheet are preceded by an "A:" if the data are from the SUMMARY sheet and preceded by a "B:" if the data are from the BACKUP sheet.

- On-Peak is defined as the time period between 7:00 AM and 9:00 PM on Monday through Friday.
- Off-Peak is defined as the time period between 9:00 PM on one day and 7:00 AM the next day.
- On-Peak, Weekday Availability in col E(11) is based on HECO projection of HPOWER performance during such periods. Maintenance outages do not count against this availability statistic. Only forced outages during the specific weekday, on-peak period count against this value.
- Capacity Charge in col E(12) is calculated per the HPOWER PPA, Firm Capacity Amendment, pD-6.
- Capacity in col E(13) is specified in HPOWER PPA, Firm Capacity Amendment, pB-8.
- On-Peak and Off-Peak Energy Rates in cols. E(14), E(15), E(16) and E(17) are described in the HPOWER PPA, Firm Capacity Amendment, p D-3 and D-4.
- The On-Peak MWh data in col C and the Off-Peak MWh data in col D are from HECO 2005 Operational/Budget Production Simulation dtd 07/02/05.
- The Total MWh in col E is calculated from C + D.
- The Total Energy cost in col F is calculated from B:M + B:R.
- The Capacity cost in col G is calculated from B:H * E(13) * E(12).
- The Total Expenses in col H is calculated from F + G.

asted Expenses date

		OFF-PEAK			
Day	Energy	Potential	Forecasted		
		First 250 MWh/Day	First 250 MWh/Day	Excess Over 250 MWh/Day	Excess Over 250 MWh/Day
\$0	\$1,943,555	7,750	\$639,143	5,084	\$419,277
\$0	\$1,755,469	7,000	\$577,290	4,592	\$378,702
\$0	\$1,037,956	5,050	\$416,474	1,804	\$148,776
\$0	\$1,769,402	7,420	\$611,927	4,264	\$351,652
\$0	\$1,943,555	7,750	\$639,143	5,084	\$419,277
\$0	\$1,880,860	7,500	\$618,525	4,920	\$405,752
\$0	\$1,943,555	7,750	\$639,143	5,084	\$419,277
\$0	\$1,880,860	7,500	\$618,525	4,920	\$405,752
\$0	\$1,859,962	7,690	\$634,194	4,592	\$378,702
\$0	\$1,741,537	7,400	\$610,278	4,100	\$338,127
\$0	\$1,748,503	7,610	\$627,597	3,936	\$324,602
\$0	\$21,448,770	88,170	\$7,271,380	53,464	\$4,409,176
					\$11,680,556

General reference to a column without reference to a row means to use the data of the spreadsheet may draw on data from another sheet. Elements of a "B;" if the data are from the BACKUP sheet.

consists of 3/12/05-3/19/05, for 5 weekdays of 23 MW loss, 3/20-3/29/05 for 7 weekdays of 23 MW loss, 11/01-11/05/05, for 4 wkdays of 23 MW loss, and 12/02-12/08/05, for *14), April as (1)*(14), Oct. as (0.5)*(14), Nov. as (2*(14), and Dec. as (2.5)*(14).

the month of March is calculated as (644 MW*11days)+(23 MW*14 hrs*10days),

l * 1000.

als zero.

10 * K) + (A:E(14) * 1000 * I).

e, the month of March is calculated as (250 MW*11days) + (23 MW*10 hrs*10 days)

from A:E(16) * N * 1000.

ials zero.

* P) + (A:E(16) * 1000 * N).

H-POWER ENERGY RATE CALCULATIONHECO-RWP-503
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Filed Quarterly Avoided Energy Cost

On-Peak	\$0.1202 /kWh	(rounded to 4 decimal places)
Off-Peak	\$0.0913 /kWh	(rounded to 4 decimal places)

Applicable Rate for Quarter

On-Peak		
	<= 644,000 kWh/day	\$0.10817
	Excess	\$0.10817
Off-Peak		
	<= 250,000 kWh/day	\$0.08247
	Excess	\$0.08247

Floor Rates

On-Peak		
	<= 644,000 kWh/day	\$0.0721
	Excess	\$0.0670
Off-Peak		
	<= 250,000 kWh/day	\$0.0560
	Excess	\$0.0519

Discount

On-Peak			Discount
	\$0.0792 to	\$0.0899	0.10
	\$0.0900 to	\$0.1007	0.15
	\$0.1008 to	\$0.1115	0.20
	>=	\$0.1116	0.25
Off-Peak			
	\$0.0610 to	\$0.0689	0.10
	\$0.0690 to	\$0.0769	0.15
	\$0.0770 to	\$0.0849	0.20
	>=	\$0.0850	0.25

Hawaiian Electric Company, Inc.

2005 TEST YEAR ENERGY EXPENSE
OTHER: CHEVRON AND TESORO
(\$000)

Chevron energy expense

Assumptions:

1. Energy received -- 735,181 kWh
2. On-peak avoided energy cost payment rate -- \$0.1202 / kWh
3. Off-peak avoided energy cost payment rate -- \$0.0913 / kWh
4. On-peak period -- 7 a.m. to 9 p.m. (14 hours)
Off-peak period -- 9 p.m. to 7 a.m. (10 hours)

Calculations:

1. On-peak energy expense = $735,181 \text{ kWh} \times 14/24 \times \$0.1202 / \text{kWh} = \$51,548$
2. Off-peak energy expense = $735,181 \text{ kWh} \times 10/24 \times \$0.0913 / \text{kWh} = \$27,968$
3. Total energy expense = \$79,516

Tesoro energy expense

Assumptions:

1. Energy received -- 6,254,736 kWh
2. On-peak avoided energy cost payment rate -- \$0.1202 / kWh
3. Off-peak avoided energy cost payment rate -- \$0.0913 / kWh
4. On-peak period -- 7 a.m. to 9 p.m. (14 hours)
Off-peak period -- 9 p.m. to 7 a.m. (10 hours)

Calculations:

1. On-peak energy expense = $6,254,736 \text{ kWh} \times 14/24 \times \$0.1202 / \text{kWh} = \$438,561$
2. Off-peak energy expense = $6,254,736 \text{ kWh} \times 10/24 \times \$0.0913 / \text{kWh} = \$237,941$
3. Total energy expense = \$676,502

HAWAIIAN ELECTRIC COMPANY, INC.
2005 TEST YEAR

Department: Energy Projects
Account Block Description: Construction
Account Group Description: Capital
NARUC: 107
NARUC Description: CWIP

	Lbr/NLbr	Act #	Activity	Exp Element	EE #	FY05 Budget05
1	Labor	211/212	Design & Construct	Labor Cost	150	\$287,822
2	Labor		NPW	Non-Productive Wages	421	<u>\$33,688</u>
3				TOTAL LABOR:		\$321,510
4						
5	Non-Labor			Stores Overheads	401	\$67,977
6	Non-Labor			En Del OH	404	<u>\$195,145</u>

HAWAIIAN ELECTRIC COMPANY, INC.
2005 TEST YEAR

Department: Energy Projects
Account Block Description: Intercompany
Account Group Description: Billable
NARUC: 1861
NARUC Description: Chgs Bill Assoc Cos

	Lbr/NLbr	*Act #	Activity	Exp Element	*EE #	FY05 Budget05
1	Labor	210	Plan & Approve Projects	Labor Cost	150	\$47,971
2	Labor	210	Plan & Approve Projects	Non-Productive Wages	421	\$3,484
4	Labor	211	Engr Design & Mng Proj	Labor Cost	150	\$167,458
5	Labor	211	Engr Design & Mng Proj	Labor True-up	155	\$0
6	Labor	211	Engr Design & Mng Proj	Non-Productive Wages	421	\$20,857
8	Labor	701	Dev & Mg Forecasts	Labor Cost	150	\$22,107
9	Labor	701	Dev & Mg Forecasts	Non-Productive Wages	421	\$3,560
11	Labor	711	Adm & Impl IRP Pgm-Base	Labor Cost	150	\$6,312
12	Labor	711	Adm & Impl IRP Pgm-Base	Non-Productive Wages	421	\$458
14	Labor	712	Adm & Impl IRP Pgm-Incr	Labor Cost	150	\$1,578
15	Labor	712	Adm & Impl IRP Pgm-Incr	Non-Productive Wages	421	\$115
17	Labor	720	Improve Bus Processes	Labor Cost	150	\$22,107
18	Labor	720	Improve Bus Processes	Non-Productive Wages	421	\$3,560
20	Non-Labor	210	Plan & Approve Projects	Corp Admin Expense	406	\$2,189
21	Non-Labor	210	Plan & Approve Projects	Employee Benefits	422	\$7,287
22	Non-Labor	210	Plan & Approve Projects	Outside Svcs-General	501	\$7,200
23	Non-Labor	210	Plan & Approve Projects	Payroll Taxes	423	\$4,025
25	Non-Labor	211	Engr Design & Mng Proj	Corp Admin Expense	406	\$13,104
26	Non-Labor	211	Engr Design & Mng Proj	Employee Benefits	422	\$43,625
27	Non-Labor	211	Engr Design & Mng Proj	Interisland Travel	522	\$0
28	Non-Labor	211	Engr Design & Mng Proj	Outside Svcs-Engr	506	\$0
29	Non-Labor	211	Engr Design & Mng Proj	Payroll Taxes	423	\$14,050
30	Non-Labor	211	Engr Design & Mng Proj	Vehicles	301	\$0
32	Non-Labor	700	Dev & Adm Business Plans	Interisland Travel	522	\$13,200
33	Non-Labor	700	Dev & Adm Business Plans	Mainland Travel	520	\$6,720
34	Non-Labor	700	Dev & Adm Business Plans	Matl-Purchasing Card	205	\$1,320
35	Non-Labor	700	Dev & Adm Business Plans	Meals & Entertainment	521	\$10,392
36	Non-Labor	700	Dev & Adm Business Plans	Rents	570	\$2,400
38	Non-Labor	701	Dev & Mg Forecasts	Corp Admin Expense	406	\$2,237
39	Non-Labor	701	Dev & Mg Forecasts	Employee Benefits	422	\$7,447
40	Non-Labor	701	Dev & Mg Forecasts	Payroll Taxes	423	\$1,855
42	Non-Labor	711	Adm & Impl IRP Pgm-Base	Corp Admin Expense	406	\$288
43	Non-Labor	711	Adm & Impl IRP Pgm-Base	Employee Benefits	422	\$959
44	Non-Labor	711	Adm & Impl IRP Pgm-Base	Payroll Taxes	423	\$530
46	Non-Labor	712	Adm & Impl IRP Pgm-Incr	Corp Admin Expense	406	\$72
47	Non-Labor	712	Adm & Impl IRP Pgm-Incr	Employee Benefits	422	\$240
48	Non-Labor	712	Adm & Impl IRP Pgm-Incr	Payroll Taxes	423	\$132
50	Non-Labor	720	Improve Bus Processes	Corp Admin Expense	406	\$2,237
51	Non-Labor	720	Improve Bus Processes	Employee Benefits	422	\$7,447
52	Non-Labor	720	Improve Bus Processes	Payroll Taxes	423	\$1,855
54			TOTAL BILLABLE			\$450,378

HAWAIIAN ELECTRIC COMPANY, INC.
2005 TEST YEAR

Department: Energy Projects
Account Block Description: Charges to Clearing
Account Group Description: Charges to Clearing
NARUC: 184
NARUC Description: Clearing Accounts

Lbr/NLbr	*Act #	Activity	Exp Element	*EE #	FY05 Budget05
Labor	98	Payroll Cost Center	Nonproductive Time	107	\$65,349

Note: These costs reflect the addition of one Senior Technical Services Engineer in April 2005.

HAWAIIAN ELECTRIC COMPANY, INC.
2005 TEST YEAR

Department: Energy Projects
Account Block Description: Prod Oper
Account Group Description: O&M
NARUC: 546

	NARUC Descr	Lbr/NLbr	*Act #	Activity	Exp Element	*EE #	FY05 Budget05
1	Gen Elec	Labor	210	Plan & Approve Projects	Labor Cost	150	\$47,971
2	Gen Elec	Labor	211	Engr Design & Mng Proj	Labor Cost	150	\$118,386
3	Mng & Supp	Labor	701	Dev & Mg Forecasts	Labor Cost	150	\$26,944
4	Mng & Supp	Labor	720	Improve Bus Processes	Labor Cost	150	\$19,308
5		Labor	-	-	Non-Productive Wages	421	<u>\$43,297</u>
6						TOTAL	\$255,907
7							
8	Gen Elec	Non-Labor	211	Engr Design & Mng Proj	Vehicles	301	\$8,280
9	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Matl-Purchasing Card	205	\$2,400
10	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Matl-Purchasing Card	205	\$3,000
11	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Outside Svcs-General	501	\$2,130
12	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Mainland Travel	520	\$3,360
13	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Mainland Travel	520	\$3,640
14	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Meals & Entertainment	521	\$500
15	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Meals & Entertainment	521	\$5,196
16	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Meals & Entertainment	521	\$5,629
17	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Interisland Travel	522	\$6,600
18	Mng & Supp	Non-Labor	700	Dev & Adm Business Plans	Interisland Travel	522	\$6,600
19		Non-Labor	-	-	Corp Admin Expense	406	\$29,015
20		Non-Labor	-	-	Employee Benefits	422	\$88,618
21		Non-Labor	-	-	Payroll Taxes	423	<u>\$30,927</u>
22						TOTAL	\$195,895
23							
24					TOTAL O&M		<u>\$451,802</u>
25							

26 Note: These costs reflect the addition of one Senior Technical Services Engineer in April 2005.

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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CONSTRUCTION & MAINTENANCE

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Manager	E_ED	1	1			
2	Secretary	I_ED	1	1			
3	Environmental Specialis	TCS_ED	1	1			
4	Administrator	TCS_ED	1	1			
5	Training Supervisor	TCS_ED				1	PTM - 1/05
6	Lead Functional Admin	TC_ED	1	1			
7	Training Administrator	TC_ED	1	1			
8	Administration		6	6	0	1	
9	Sr. T&D Engineer	TCS_ED				1	Sr. Supervisor Planning 2/05
10	Staff Engineer	TC_ED	2	2			
11	Sr. Supervisor, Planning	TCS_ED	1	1		1	Engineering - 5/05
12	Resource Planner	TC_ED	4	5			
13	Work Coordinator	TC_ED	1	1			
14	Data Mgmt Coord / Project Coordinator	I_ED	1			1	Work Coordinator - 2/05
15	Construct Manager	TC_ED	0	1			
16	Planning Administrator	TC_ED					
17	Contract Admin	TC_ED	1	1			
18	Planning		10	11	0	3	
19	Superintendent	FS_ED	3	2			
20	Sr. Supervisor	TCS_ED				2	Supervisors (2) - 2/05
21	Supervisors	TCS_ED	10	12			
22	Operational		13	14	0	2	
23	System Arborist	TC_ED	2	2			
24	Vegetation Mgmt		2	2	0	0	
25	Division Clerk	BUOCED	6	6			
26	JP Aide	BUOCED	1	1			
27	JP Coord	JP_COORD	1	1			
28	Clerical		8	8	0	0	
29	Sr PTM	PTM		1			
30	PTM	PTM	22	19		1	PTM 1st Year - 3/05

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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CONSTRUCTION & MAINTENANCE

A		B	C	D	E	F	G
		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	PTM 1st Year	PTM	4	1	1	3	Lineman Thereafter - 3/05, Lineman Thereafter - 5/05, Working Foreman - 5/05
2	PTM Apprentice	OH_CREW				2	Senior Helpers (2) - 6/05
3	PTM		26	21	1	6	
4	OH Wkg Foreman	OH_CREW	14	20		3	T&D Inspector - 5/05, Aerial Lineman - 7/05, Lineman Thereafter - 7/05
5	Aerial Lineman	OH_CREW	7	7		2	Inspector - 6/05, Lineman Thereafter - 7/05
6	Lineman Thereafter	OH_CREW	52	59		1	Return from Termination - 5/05
7	Lineman 1st Year	OH_CREW	7	3			
8	OH Apprentices	OH_CREW	41	18		10	Senior Helpers (6) - 2/05, Senior Helpers (4) - 6/05
9	Senior Helper	OH_CREW		14			
10	Inspectors	OH_CREW	4	8			
11	Truck Driver D	OH_CREW	6	4			
12	Prefab Assembler	OH_CREW		1			
13	Overhead		131	134	0	16	
14	UG Wkg Foreman	UG_CREW	1	6			
15	Lead Cable Splicer	UG_CREW	3	4			
16	Sr. Cable Splicer	UG_CREW		6		2	Cable Splicer (2) - 7/05

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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CONSTRUCTION & MAINTENANCE

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Cable Splicer	UG_CREW	10	2	1	3	Lineman Thereafter - 3/05, Lineman Thereafter (2) - 6/05
2	Lead Utility Mechanic	UG_CREW		1			
3	Utility Mechanic	UG_CREW	3				
4	Utility Assistant	UG_CREW	7	4			
5	Underground		24	23	1	5	
6	TOTAL		220	219	2	33	

CONSTRUCTION & MAINTENANCE

A B C E F G

		Reductions		Actual 7/26/05	Additions	
		Changes	Description		Pending	
1	Manager			1		
2	Secretary			1		
3	Environmental Specialist			1		
4	Administrator			1		
5	Training Supervisor			1		
6	Lead Functional Admin			1		
7	Training Administrator			1		
8	Administration	0		7	0	
9	Gen. T&D Engineer			1		

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CONSTRUCTION & MAINTENANCE

A B C E F G

		Reductions		Actual 7/26/05	Additions	
		Changes	Description		Pending	
1	System Arborist			2		
2	Vegetation Mgmt	0		2	0	
3	Division Clerk			6		
4	JP Aide			1		
5	JP Coord			1		
6	Clerical	0		8	0	
7	Sr PTM			1		
8	PTM	(2)	Training Supervisor - 1/05, System Operations - 4/05	18		
9	PTM 1st Year	(1)	PTM - 3/05	3		
10	PTM Apprentice			2	2	13 applicants passed knowledge test, job sample testing to be performed on August 4-5, anticipated hire date of August 2005.
11	PTM	(3)		24	2	
12	OH Wkg Foreman	(2)	Termination - 3/05, PTM 1st Year - 5/05	21		
13	Aerial Lineman	(1)	Working Foreman - 7/05	8		
14	Lineman Thereafter	(7)	Cable Splicer - 3/05, PTM 1st Year - 3/05, PTM 1st Year - 5/05, Cable Splicer (2) - 6/05, Aerial Lineman - 7/05, Working Foreman - 7/05	53		
15	Lineman 1st Year			3		
16	OH Apprentices			28		

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CONSTRUCTION & MAINTENANCE

A

B

C

E

F

G

		Reductions		Actual	Additions	
		Changes	Description	7/26/05	Pending	
1	Senior Helper	(14)	OH Apprentice (6) - 2/05, Power Supply - 3/05, OH Apprentice (4) - 6/05, PTM Apprentice (2) - 6/05, Power Supply - 7/05	0		
2	Inspectors	(2)	Working Foreman - 5/05, Aerial Lineman - 6/05	6		
3	Truck Driver D			4	1	Position posted, pending acceptance by senior applicant, anticipated hire date of August 2005.
4	Prefab Assembler			1		
5	Overhead	(26)		124	1	
6	UG Wkg Foreman			6		
7	Lead Cable Splicer			4		
8	Sr. Cable Splicer			8		
9	Cable Splicer	(2)	Sr. Cable Splicer (2) - 7/05	3		
10	Lead Utility Mechanic			1		
11	Utility Mechanic			0		
12	Utility Assistant			4		
13	Underground	(2)		26	0	
14	TOTAL	(36)		216	5	

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CONSTRUCTION & MAINTENANCE

	A	B	C	D
		Reductions		
		Pending		Estimated
1	Manager			1
2	Secretary			1
3	Environmental Specialist			1
4	Administrator			1
5	Training Supervisor			1
6	Lead Functional Admin			1
7	Training Administrator			1
8	Administration	0		7
9	Sr. T&D Engineer			1
10	Staff Engineer			2
11	Sr. Supervisor, Planning			1
12	Resource Planner			5
3	Work Coordinator			0
	Data Mgmt Coord /			
14	Project Coordinator			1
15	Construct Manager			1
16	Planning Administrator			1
17	Contract Admin			1
18	Planning	0		13
19	Superintendent			2
20	Sr. Supervisor			2
21	Supervisors			10
22	Operational	0		14
23	System Arborist			2
24	Vegetation Mgmt	0		2
25	Division Clerk			6
26	JP Aide			1
27	JP Coord			1
28	Clerical	0		8
29	Sr PTM			1
30	PTM			18
31	PTM 1st Year			3

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CONSTRUCTION & MAINTENANCE

	A	B	C	D
		Reductions		Estimated
		Pending		
1	PTM Apprentice			4
2	PTM	0		26
3	OH Wkg Foreman			21
4	Aerial Lineman			8
5	Lineman Thereafter			53
6	Lineman 1st Year			3
7	OH Apprentices			28
8	Senior Helper			0
9	Inspectors			6
10	Truck Driver D			5
11	Prefab Assembler			1
12	Overhead	0		125
13	UG Wkg Foreman			6
14	Lead Cable Splicer			4
15	Sr. Cable Splicer			8
16	Cable Splicer			3
17	Lead Utility Mechanic			1
18	Utility Mechanic			0
19	Utility Assistant			4
20	Underground	0		26
21	TOTAL	0		221

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A	B	C	D	E	F	G
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		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	System Operation Clerk	BUOCED	2	2			
2	Substation Clerk	BUOCED	1	1			
3	Mgr., System Operation	E-Ed	1	1		1	Mgr., Special Projects - 4/05
4	Secretary	I-ED	1	0	1	1	External hire - 4/05
5	Administrator	TCS-ED	1	1			
6	Administration		6	5	1	2	
7	Technical Engineer	R_COMENG	1	1			
8	Supv., Communications	R_COMSUP	1	1		1	External hire - 2/05
9	Technician (Comm)	R_COMTEC	4	3		1	Senior Electrician - 6/05
10	Sr. Electrician (Comm)	R_COMTEC	1	1			
11	Electrician (Comm)	R_COMTEC	1	1	1	1	External hire - 1/05
12	Communications		8	7	1	3	
13	Construction Journeyman	R_CONCRW	2	1			
14	Working Foreman	R_CONCRW	1	1			
15	Supv., Construction Mgt.	R_CONCRW	0	1			
16	Construction Mgt. Division		3	3	0	0	
17	EFMS Tech	R_ENGMAP	4	3	1	1	External hire - 2/05
18	Sr. EFMS Tech	R_ENGMAP	1	1		1	EFMS Tech - 6/05
19	Sr. Engineer	R_ENGSRE	1	1			
20	Electrical Engineer	R_ENGSTF	1	1			
21	Systems Analyst	R_ENGSTF	3	2	1		
22	Systems Analyst (OMS)	R_ENGSTF	0	0			
23	Systems Engineer	R_ENGSTF	2	1	1	1	External hire - 4/05

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SYSTEM OPERATIONS

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Mapping Supervisor	R_ENGSUP	1	1			
2	Operating Engineering		13	10	3	3	
3	Technicians (I&C)	R_INSCRW	4	4			
4	Sr. Electrician (I&C)	R_INSCRW	1	0		1	Electrician - 5/05
5	Electrician (I&C)	R_INSCRW	1	2			
6	Computer Electronics Engr.	R_INSENG	2	2			
7	Supv., Instrument & Control	R_INSSUP	1	1			
8	Instrument & Control		9	9	0	1	
9	Trouble Dispatcher	R_OPEDIS	6	6	1		
10	Trouble Dispatcher (add'l)	R_OPEDIS	0	0			
11	Trouble Dispatcher	R_OPEDIS	5	5	0	1	

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SYSTEM OPERATIONS

A B C D E F G						
		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions
						Changes Description
1	Technical Trainer	R_OPESTF	0	0		
2	Supervising Load Dispatcher	R_OPESUP	6	6		Supv. Relay - 3/05, CID - 4/05, C&M - 4/05, C&M - 5/05
3	Operating Division		23	20	3	6
4	Sr. Electricians (Relay)	R_RELCRW	2	3		
5	Electrician (Relay)	R_RELCRW	0	0		
6	Technician (Relay)	R_RELCRW	4	3		1 Sr. Electrician - 5/05
7	Test Engineer	R_RELENG	2	2		
8	Supv., Relay	R_RELSUP	1	1		1 Technician - 5/05
9	Supt., Technical Services	R_TECSTPT	1	1		
10	Relay		10	10	0	2
11	Substation Electrician	R_SUBCRW	25	27	1	4 External hire - 5/05, External hire (2) - 6/05, External hire - 7/05
12	Substation Inspector	R_SUBCRW	1	1		1 Substation Electrician - 7/05
13	Working Foreman	R_SUBCRW	2	2		
14	Substation Technician	R_SUBCRW	2	2		
15	PDM Specialist	R_SUBCRW	1	0		1 External hire - 4/05
16	Service Engineer	R_SUBENG	1	1		
17	PDM Engineer	R_SUBENG	1	0		1 External hire - 4/05
18	Substation Planner/Scheduler	R_SUBPLN	1	1		
19	PDM Specialist	R_SUBPLN	1	0		
20	Supv., Substation	R_SUBSUP	2	2		
21	Substation		37	36	1	7
22	TOTAL		109	100	9	24

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SYSTEM OPERATIONS

A B C E F G

	Reductions		Actual 7/26/05	Additions	
	Changes	Description		Pending	
1	System Operation				
	Clerk		2		
2	Substation Clerk		1		
	Mgr., System	Retirement -			

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SYSTEM OPERATIONS

A B C E F G

		Reductions		Actual 7/26/05	Additions	
		Changes	Description		Pending	
1	Electrical Engineer			1		
2	Systems Analyst			2	1	Job posted, interviews planned early August, anticipate hiring in Sept 2005
3	Systems Analyst (OMS)			0	1	Interviewing week of 7/25/05, anticipate hiring in Aug.
4	Systems Engineer			2		
5	Mapping Supervisor	(1)	HELCO - 5/05	0	1	Anticipate hiring in Sept 2005
6	Operating Engineering	(3)		10	4	
7	Technicians (I&C)			4		
8	Sr. Electrician (I&C)			1		
9	Electrician (I&C)	(1)	Sr. Electrician - 5/05	1		
10	Computer Electronics Engr.			2		
11	Supv., Instrument & Control			1		
12	Instrument & Control	(1)		9	0	
13	Trouble Dispatcher	(1)	Load Dispatcher - 4/05	5	2	currently in psychological testing phase, anticipate hiring in Aug 2005. Subsequently hire replacement for

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SYSTEM OPERATIONS

A B C E F G

	Reductions		Actual 7/26/05	Additions	
	Changes	Description		Pending	
1		Trouble Dispatcher (add'l)	0	1	Pool of candidates previously interviewed, anticipate filling in Sept 2005
2		Load Dispatcher	4	1	Anticipate hiring in Oct 2005
3		Supt., Operating Division	1		
4		Chief Dispatcher	0	1	Promote SLD in October 2005, backfill SLD in 2006
5		Operations Engineer	2		
6		Operations Engineer (OMS)	1		
7		Reliability Analyst	1		
8		Switching Coordinator	1		
9		Switching Coordinator (add'l)	0	1	Anticipate filling in October 2005
10		System Coordinator	0	1	Anticipate filling in Sept 2005
11		Technical Trainer	0	1	Power Supply - 8/05
12		Supervising Load Dispatcher	10		
13	(1)	Operating Division	25	8	
14	(1)	Sr. Electricians (Relay)	2		
15		Electrician (Relay)	0	1	External hire - 8/05
		Supv. Relay -			

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SYSTEM OPERATIONS

A B C E F G

		Reductions		Actual	Additions	
		Changes	Description	7/26/05	Pending	
1	Test Engineer			2		
2	Supv., Relay	(1)	SLD - 3/05	1		
3	Supt., Technical Services			1		
4	Relay	(3)		9	1	
5	Substation Electrician	(4)	Meter (2) - 1/05, Meter 4/05, Inspector - 7/05	27		
6	Substation Inspector	(1)	Retirement - 7/05	1		
7	Working Foreman			2		
8	Substation Technician			2		
9	PDM Specialist			1		
10	Service Engineer			1		
11	PDM Engineer			1		
12	Substation Planner/Scheduler			1		
13	PDM Specialist			0		
14	Supv., Substation			2		
15	Substation	(5)		38	0	
16	TOTAL	(16)		108	13	

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SYSTEM OPERATIONS

				A	B	C	D
				Reductions			
				Pending			Estimated
1	System Operation Clerk						2
2	Substation Clerk						1
3	Mgr., System Operation						1
4	Secretary						1
5	Administrator						1
6	Administration	0					6
7	Technical Engineer						1
8	Supv., Communications						1
9	Technician (Comm)						4
10	Sr. Electrician (Comm)						0
11	Electrician (Comm)						2
2	Communications	0					8
13	Construction Journeyman						1
14	Working Foreman						1
15	Supv., Construction Mgt.						1
16	Construction Mgt. Division	0					3
17	EFMS Tech						4
18	Sr. EFMS Tech						0
19	Sr. Engineer						1
20	Electrical Engineer						1
21	Systems Analyst						3
22	Systems Analyst (OMS)						1
23	Systems Engineer						2
24	Mapping Supervisor						1
25	Operating Engineering	0					14
26	Technicians (I&C)						4
27	Sr. Electrician (I&C)						1
28	Electrician (I&C)						1
29	Computer Electronics Engr.						2

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SYSTEM OPERATIONS

A B C D

		Reductions	
		Pending	Estimated
1	Supv., Instrument & Control		1
2	Instrument & Control	0	9
3	Trouble Dispatcher	(1)	Promotion to LD
4	Trouble Dispatcher (add'l)		1
5	Load Dispatcher		5
6	Supt., Operating Division		1
7	Chief Dispatcher		1
8	Operations Engineer		2
9	Operations Engineer (OMS)		1
10	Reliability Analyst		1
11	Switching Coordinator		1
2	Switching Coordinator (add'l)		1
13	System Coordinator		1
14	Technical Trainer		1
15	Supervising Load Dispatcher	(4)	Retirement - 8/05, Retirement (2) - 10/05, Promote to Chief Dispatcher - 10/05
16	Operating Division	(5)	28
17	Sr. Electricians (Relay)		2
18	Electrician (Relay)		1
19	Technician (Relay)		3
20	Test Engineer		2
21	Supv., Relay		1
22	Supt., Technical Services		1
23	Relay	0	10
24	Substation Electrician		27
25	Substation Inspector		1
26	Working Foreman		2
27	Substation Technician		2
28	PDM Specialist		1
29	Service Engineer		1

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SYSTEM OPERATIONS

A B C D

		Reductions		
		Pending		Estimated
1	PDM Engineer			1
2	Substation Planner/Scheduler			1
3	PDM Specialist			0
4	Supv., Substation			2
5	Substation	0		38
6	TOTAL	(5)		116

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ENGINEERING

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Manager		1	1			
2	Administrator		1	1			
3	Secretary		1	1			
4	Statistical Clerk		1	1			
5	Clerk Typist III		2	2			
6	Drawing Control Clerk		1	1			
7	Administration		7	7	0	0	
8	Principal Engineer		1	1			
9	Lead Engineer		3	3			
10	Engineer II		16	14	2	3	Designer II (2) - 1/05, Designer II - 6/05
11	Engineer II						
12	Drafting Tech III		2	2			
13	Project Clerk		1	1			
14	Transmission & Distribution		23	21	2	3	
15	Director		1	1			
16	Project Manager		3	2	1	1	Project Manager - 1/05
17	Project Manager				1		
18	Project Analyst		1	1			
19	Project Administrator		1	1			
20	Project Coordinator		1				
21	Administrative Assistant		1		1		
22	Project Mgmt		8	5	3	1	
23	Principal Engineer		1	1			
24	Lead Engineer		2	2			
25	Engineer II		6	6			
26	Sr. Land Surveyor		1	1			
27	Land Surveyor		3	2	1	1	Land Surveyor - 5/05
28	Transit Tech		1	1			

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ENGINEERING

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Survey Rod Helper		1	1			
2	Drafting Tech II		2	2			
3	Project Clerk		1	1			
4	Structural		18	17	1	1	
5	Principal Engineer		1	1			
6	Lead Engineer		2	2			
7	Engineer II		10	9	1	2	Engineer II (2) - 1/05
8	Engineer II						
9	Sr. Telecomm Engr		1	1			
	Lead Protection						
10	Engineer		1	1			
11	Protection Engineer		3	3			
12	Design Draft Tech		1	1			
13	Drafting Tech III		1	1			
14	Project Clerk		1	1			
	Substation, Protection & Telecommunications						
15			21	20	1	2	
16	Principal Engineer		1	1			
17	Lead Tech Svcs Engr		4	4			
18	Tech Svcs Engr		2	1	1		
19	Tech Svcs Engr		1	1			
20	Drafting Tech		1	1			
21	Standards Clerk		1	1			
22	Technical Services		10	9	1	0	
23	TOTAL		87	79	8	7	

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ENGINEERING

A B C E F G

		Reductions		Actual 7/26/05	Additions	
		Changes	Description		Pending	
1	Manager			1		
2	Administrator			1		
3	Secretary			1		
4	Statistical Clerk			1		
5	Clerk Typist III			2		
6	Drawing Control Clerk			1		
7	Administration	0		7	0	
8	Principal Engineer			1		
9	Lead Engineer	(1)	Lead Engineer - 5/05	2	1	Anticipate hiring in Nov 2005
10	Engineer II	(1)	Designer II - 6/05	16	2	Anticipate hiring (2) in Nov 2005
11	Engineer II			0	1	Anticipate hiring in Oct 2005
12	Drafting Tech III			2		
13	Project Clerk			1		
14	Transmission & Distribution	(2)		22	4	
15	Director			1		
16	Project Manager			3		
17	Project Manager			0	1	Anticipate hiring in Nov 2005
18	Project Analyst			1		
19	Project Administrator		Position reallocated to T&D Engineer II	1		
20	Administrative Assistant		Position Eliminated			
21	Project Mgmt	0		6	1	
22	Principal Engineer			1		
23	Lead Engineer			2		
24	Engineer II	(1)	Engineer II - 4/05	5	1	Anticipate hiring in Sept 2005

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ENGINEERING

A B C E F G

		Reductions		Actual 7/26/05	Additions	
		Changes	Description		Pending	
1	Sr. Land Surveyor			1		
2	Land Surveyor			3		
3	Transit Tech			1		
4	Survey Rod Helper			1		
5	Drafting Tech II			2		
6	Project Clerk			1		
7	Structural	(1)		17	1	
8	Principal Engineer			1		
9	Lead Engineer			2		
10	Engineer II	(1)	Engineer II - 4/05	10		
11	Engineer II			0	1	Anticipate hiring in Sept 2005
12	Sr. Telecomm Engr			1		
	Lead Protection					
13	Engineer			1		
14	Protection Engineer			3		
15	Design Draft Tech			1		
16	Drafting Tech III			1		
17	Project Clerk			1		
18	Substation, Protection & Telecommunications	(1)		21	1	
19	Principal Engineer			1		
20	Lead Tech Svcs Engr			4		
21	Tech Svcs Engr			1	1	Anticipate hiring in Oct 2005
22	Tech Svcs Engr			1		
23	Drafting Tech			1		
24	Standards Clerk			1		
25	Technical Services	0		9	1	
26	TOTAL	(4)		82	8	

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ENGINEERING

A B C D

		Reductions	
		Pending	Estimated
1	Manager		1
2	Administrator		1
3	Secretary		1
4	Statistical Clerk		1
5	Clerk Typist III		2
6	Drawing Control Clerk		1
7	Administration	0	7
8	Principal Engineer		1
9	Lead Engineer		3
10	Engineer II		18
11	Engineer II		1
12	Drafting Tech III		2
13	Project Clerk		1
14	Transmission & Distribution	0	26
15	Director		1
16	Project Manager		3
17	Project Manager		1
18	Project Analyst		1
19	Project Administrator		1
20	Project Mgmt	0	7
21	Principal Engineer		1
22	Lead Engineer		2
23	Engineer II		6
24	Sr. Land Surveyor		1
25	Land Surveyor		3
26	Transit Tech		1
27	Survey Rod Helper		1
28	Drafting Tech II		2
29	Project Clerk		1
30	Structural	0	18
31	Principal Engineer		1

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ENGINEERING

A B C D

		Reductions	
		Pending	Estimated
1	Lead Engineer		2
2	Engineer II		10
3	Engineer II		1
4	Sr. Telecomm Engr		1
5	Lead Protection Engineer		1
6	Protection Engineer		3
7	Design Draft Tech		1
8	Drafting Tech III		1
9	Project Clerk		1
10	Substation, Protection & Telecommunications	0	22
11	Principal Engineer		1
12	Lead Tech Svcs Engr		4
13	Tech Svcs Engr		2
14	Tech Svcs Engr		1
15	Drafting Tech		1
16	Standards Clerk		1
17	Technical Services	0	10
18	TOTAL	0	90

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Manager	E	1	1			
2	Secretary		1	1			

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A B C D E F G

		Labor Class	Direct Testimony	Actual 1/1/05	Open 1/1/05	Additions	
						Changes	Description
1	Electrician	__BUTCED	3	3			
2	Welders	__BUTCED	4	4			
3	Utility Mechanic	__BUTCED	2	2			
4	Clerical	__BUOCED	1	1			
5	Electrical & Welding Services		13	13	0	0	
6	TOTAL		81	81	0	3	

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A		B	C	E	F	G
		Reductions		Actual	Additions	
		Changes	Description	7/26/05	Pending	
1	Manager			1		
2	Secretary			1		
3	Fleet Engineer			1		
4	System Administrator			1		
	Lead Functional					
5	Administrator			1		
6	Administration	0		5	0	
7	Director			1		
	Senior Contract					Anticipate hiring in October 2005.
8	Administrator			0	1	
9	Buyers			7		
10	Clerical			3		
11	Purchasing	0		11	1	
12	Director			1		
13	Supervisor			1		
14	Material Analyst			2		
15	Warehouse Attendant			21		
16	Materials Coordinator			2		
17	Receiving Clerk			1		
	Materials					
18	Management	0		28	0	
19	Supervisor	(1)	Retirement - 4/05	1		
20	Fleet Coordinator			1		
			Supervisor - 2/05, Warehouse Attendant - 2/05, Meter Reading - 3/05			Mechanic - completed interviews, anticipate hiring in August 2005. Mechanic helper - anticipate hiring in November 2005.
21	Mechanics & Helpers	(3)		20	2	
22	Clerical			1		
23	Fleet Services	(4)		23	2	

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A B C E F G

		Reductions		Actual	Additions	
		Changes	Description	7/26/05	Pending	
1	Supervisor			1		
2	Foreman			2		
3	Electrician			3		
4	Welders			4		
5	Utility Mechanic					
6	Clerical					
7	Electrical & Welding Services	0		13	0	
8	TOTAL	(4)		80	3	

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A B C

		Reductions	
		Pending	Estimated
1	Manager		1
2	Secretary		1
3	Fleet Engineer		1
4	System Administrator		1
	Lead Functional Administrator		1
5			
6	Administration	0	5
7	Director		1
	Senior Contract Administrator		1
8			
9	Buyers		7
10	Clerical		3
11	Purchasing	0	12
12	Director		1
13	Supervisor		1
14	Material Analyst		2
15	Warehouse Attendant		21
16	Materials Coordinator		2
17	Receiving Clerk		1
18	Materials Management	0	28
19	Supervisor		1
20	Fleet Coordinator		1
21	Mechanics & Helpers		22
22	Clerical		1
23	Fleet Services	0	25
24	Supervisor		1
25	Foreman		2
26	Electrician		3
27	Welders		4

Hawaiian Electric Company, Inc.
REBUTTAL 2005 TEST YEAR

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SUPPORT SERVICES

A B C

		Reductions		Estimated
		Pending		
1	Utility Mechanic			
2	Clerical			
3	Electrical & Welding Services	0		13
4	TOTAL	0		83

PAGE 1 OF 1

HAWAIIAN ELECTRIC COMPANY, INC.
CUSTOMER DEPOSITS
(Account 235.00)

	----- R E C O R D E D -----					
	1999	2000	2001	2002	2003	2004
JANUARY	2,666,438	3,048,261	3,719,126	4,232,863	4,542,477	5,096,061
FEBRUARY	2,691,079	3,065,640	3,774,112	4,316,470	4,530,123	5,124,279
MARCH	2,758,585	3,131,873	3,843,587	4,339,474	4,564,027	5,164,089
APRIL	2,658,653	3,203,210	3,871,783	4,354,984	4,590,389	5,161,650
MAY	2,702,594	3,271,868	3,906,381	4,321,465	4,616,784	5,139,280
JUNE	2,711,021	3,279,271	3,961,245	4,362,189	4,594,128	5,144,856
JULY	2,745,641	3,308,698	4,004,665	4,395,891	4,575,584	5,090,420
AUGUST	2,746,484	3,359,087	4,102,650	4,402,663	4,693,623	5,125,293
SEPTEMBER	2,785,476	3,486,467	4,136,432	4,420,526	4,812,854	5,124,987
OCTOBER	2,817,411	3,583,862	4,139,808	4,471,469	5,020,781	5,035,822
NOVEMBER	2,919,037	3,643,365	4,148,890	4,528,238	5,065,511	5,030,873
DECEMBER	3,007,616	3,667,126	4,183,110	4,482,910	5,071,972	5,065,653

Hawaiian Electric Company, Inc.

Customer Service Expense -- Adjustments to Direct Testimony (\$000)
Rebuttal Testimony

<u>ACCOUNT</u>	<u>DESCRIPTION</u>	<u>REFERENCE</u>	<u>LABOR</u>	<u>NONLABOR</u>	<u>AMOUNT</u>
910	Remove Incremental DSM Program Expense	HECO-RWP-1004	(\$823)	(\$28,400)	(\$29,223)
910	Customer Solutions Reorganization Costs				
	Take out impact of EE 's 406 and 422	HECO-RWP-1005	\$375	\$24	\$399
910	Green Power Pricing	HECO-R-1005		(\$100)	(\$100)
TOTAL 910 ADJUSTMENTS					
			(\$448)	(\$28,476)	(\$28,924)

<u>ACCOUNT</u>	<u>DESCRIPTION</u>	<u>LABOR</u>	<u>NONLABOR</u>	<u>AMOUNT</u>
911	Informational Advertising		\$750	\$750
TOTAL 911 ADJUSTMENTS				
			\$750	\$750
TOTAL CUSTOMER SERVICES ADJUSTMENTS				
		(\$448)	(\$27,726)	(\$28,174)

HECO-RWP-1001
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Hawaiian Electric Company, Inc.

**DSM Expense in Base Rates
Customer Services Expense
Rebuttal Testimony**

Line	A	B	C	D	E
	Exp Elem <u>150, 421</u>	Labor Exp Elem <u>406, 422, 423</u>	Total	Non-Lab Outside Services	Program Total
1	CIEE	74,837	30,704	105,541	105,541
2	CINC	34,431	13,734	48,165	48,165
3	CICR	43,071	18,590	61,661	61,661
4	REWH	36,739	19,346	56,085	56,085
5	RNC	<u>31,454</u>	<u>20,620</u>	<u>52,074</u>	<u>52,074</u>
6	Base Labor Total	220,532	102,994	323,526	323,526
8	RDLC	153,555	57,712	211,267	338,500
7	CIDLC	<u>101,953</u>	<u>9,489</u>	<u>111,442</u>	<u>31,228</u>
9	LM Program Total	255,508	67,201	322,709	369,728
	Program Totals In				
10	Base Rates	476,040	170,195	646,235	369,728
11	Labor (Exp Elem 150, 421)				1,015,963
12	Non-Labor (Outside Services + Exp Elem 406,422,423)				476,040
13	Program Totals In Base Rates				539,923
					1,015,963

Source:

Cols A,B: Pillar Operating Test Year Budget (Excludes acct 920/921 Base Labor)

Col D: CA-IR-533

DSM Expense Difference From Direct Testimony

	Labor <u>(\$000)</u>	Non-Labor <u>(\$000)</u>	Total <u>(\$000)</u>
14	Rebuttal DSM Expense	476	540
15	Direct DSM Expense*	<u>1,299</u>	<u>28,940</u>
16	Difference (Line 14-15)	-823	-28,400

* HECO-1012, lines 13-15

Hawaiian Electric Company, Inc.

**CUSTOMER SOLUTIONS REORGANIZATION
CUSTOMER SERVICE EXPENSE IMPACT**

Customer Services Block Impact (Per CA-IR-78)			
	<u>Direct Charges</u>	<u>On-Costs (408)</u>	<u>Total</u>
Estimated Labor	\$346,292	\$134,368	\$480,660
Estimated Nonlabor	\$24,000	-	\$24,000
Total	\$370,292	\$134,368	\$504,660

REBUTTAL ADJUSTMENT DETAILS

NARUC 910 IMPACT \$504,660

On-Cost Adjustments: (\$106,040)

Remove EE #406 (transfer to A&G) (\$17,732)

Exec. Secretary Corp Admin. (\$4,406)

Planning Analyst " (\$4,474)

VP Customer Sol. " (\$4,426)

DSM Program Engineer " (\$4,426)

Remove EE #422 (transfer to A&G) (\$59,254)

Exec. Secretary Empl Benefits (\$14,893)

Planning Analyst " (\$14,893)

VP Customer Sol. " (\$14,734)

DSM Program Engineer " (\$14,734)

Remove EE#423 (transfer to A&G) (\$29,054)

Exec. Secretary PR Taxes (\$3,710)

Planning Analyst " (\$4,724)

VP Customer Sol. " (\$15,875)

DSM Program Engineer " (\$4,745)

Revised NARUC 910 IMPACT \$398,620

Labor \$374,620

Non-Labor \$24,000

Total \$398,620

Hawaiian Electric Company, Inc.
**Fuel Oil Expense for ECAC Calculations
 2005 Test Year Rebuttal**

<u>Description</u>	(A)	(B)	(C)	(D)	(E)	(F)
	<u>Kahe</u>	<u>Waiau</u>	<u>Central Station Honolulu</u>	<u>Diesel</u>	<u>Total</u>	<u>DG Diesel</u>
1 MBtu Consumed	35,814,103	13,620,059	1,520,865	162,075	51,117,102	72,568
2 Fuel Price (\$/bbl)	53.7346	53.7346	53.7346	79.4392		79.4392
2a Trucking cost per bbl			2.4666			4.4100
3 Inspection Cost per Barrel	<u>0.0124</u>	<u>0.0124</u>	<u>0.0124</u>	<u>0.0360</u>		<u>0.0360</u>
4 Total Fuel Price (\$/bbl)	53.7470	53.7470	56.2136	79.4752		83.8852
5 Heat Content (MBtu/bbl)	6.2	6.2	6.2	5.86		5.86
6 Cost per MBtu (¢/MBtu)	866.89	866.89	906.67	1,356.23		1,431.49
7 Fuel Expense (\$)	310,467,838	118,070,532	13,789,241	2,198,113	444,525,724	1,038,802

Line 1: HECO-R-409, page 2

Line 2: HECO-R-402, line 5

Line 2a: HECO-R-402, line 6

Line 3: HECO-R-402, line 8

Line 4: HECO-R-402 line 9

Line 6: line 4 ÷ line 5 x 100

Line 7: line 1 x line 6 ÷ 100

Line 7: HECO-R-404 page 2, col C

Hawaiian Electric Company, Inc.
Determination of Percent of Generation Mix,
Fuel Price by Central Station Plant (in ¢/mbtu) and
Composite Cost of Generation (in ¢/mbtu)
2005 Test Year Rebuttal

Line	Central Station Plant	(A) MBTU	(B) % to Total Generation	Reference
1	Kahe	35,814,103	70.06	HECO-R-409 page 2
2	Waiau	13,620,059	26.64	HECO-R-409 page 2
3	Honolulu	1,520,865	2.98	HECO-R-409 page 2
4	Diesel	162,075	0.32	HECO-R-409 page 2
5	Total	51,117,102	100.00	HECO-R-409 page 2
	Central Station Plant	Fuel Expense (\$)	Fuel Price (¢/mbtu)	
6	Kahe	310,467,838	866.89	HECO-R-404 page 2
7	Waiau	118,070,532	866.89	HECO-R-404 page 2
8	Honolulu	13,789,241	906.67	HECO-R-404 page 2
9	Diesel	2,198,113	1356.23	HECO-R-404 page 2
10	Total	444,525,724		HECO-R-404 page 2
	Plant		Weighted Cost (¢/mbtu)	
11	Kahe		607.34	Line 6 ÷ Line 1
12	Waiau		230.94	Line 7 ÷ Line 2
13	Honolulu		27.02	Line 8 ÷ Line 3
14	Diesel		4.34	Line 9 ÷ Line 4
15	Composite Cost of Generation		869.64	Lines 11+12+13+14

Hawaiian Electric Company, Inc.
Determination of Percent of Purchased Energy Mix,
Payment Rate (in ¢/kwh) and
Composite Cost of Purchased Energy (in ¢/kwh)
2005 Test Year Rebuttal

No.	A Producer	B Gwh Purchased	C % to Total PP	D Payment Rate (¢/kwh)	E Weighted Cost (¢/kwh) [(colF ÷ colB) * colC * 1000]	F Purch Pwr Fuel Expense (\$ thous)
1	Kalaeloa					
	Fuel	1,548.3	45.19	7.484		115,872.1
	Additive			<u>0.128</u>		<u>1,977.6</u>
	Total	1,548.3		7.612	3.440	117,849.7
2	AES					
	Fuel	1,531.1	44.68	2.549	1.139	39,025.2
3	HPower					
	On Peak	198.3	5.79	10.817	0.626	21,448.8
	Off Peak	88.1	2.57	8.247	0.212	7,271.4
	On Peak - excess	0.0	0.00	10.817	0.000	0.0
	Off Peak - excess	<u>53.5</u>	1.56	8.247	0.129	<u>4,409.2</u>
	Total	339.9				33,129.4
4	Tesoro					
	On Peak	3.6	0.11	12.020	0.013	438.6
	Off Peak	<u>2.6</u>	0.08	9.130	0.007	<u>237.9</u>
	Total	6.2				676.5
5	Chevron					
	On Peak	0.4	0.01	12.020	0.001	51.5
	Off Peak	<u>0.3</u>	0.01	9.130	0.001	<u>28.0</u>
	Total	0.7				79.5
6	Other	-	-	0.000	0.000	-
7	Total	3,426.3	100.00		5.568	190,760.3

Composite Cost of Purchased Energy

5.568 ¢/kwh

Line 1: HECO-RWP-501, page 1
Line 2: HECO-RWP-502, page 1
Line 3: HECO-RWP-503, page 1
Lines 4&5: HECO-RWP-504
Line 7, col B: HECO-R-403, line 6

Hawaiian Electric Company, Inc.
Determination of Composite Cost of DG Energy
2005 Test Year Rebuttal

	A	B	C	D	E (colD ÷ colC x 100)	F (colD ÷ colB x 100)
			Fuel			
Line	DG Unit Location	Net to System (Kwh)	Consumed (Mbtu)	Fuel Expense (\$)	Fuel Cost (¢/mbtu)	Fuel Cost (¢/kwh)
1	Substation DG	7,380,000	72,568	1,038,802	1431.49	14.076
2					0.00	0.000
3					0.00	0.000
4					0.00	0.000
	Total	7,380,000	72,568	1,038,802	1431.49	14.076

5

Composite DG
Fuel Cost

1431.49 ¢/mbtu

6

Composite
Cost of DG
Energy

14.076 ¢/kwh

Col B: HECO-R-409 page 2

Col C: HECO-R-409 page 2

Col D: HECO-R-404 page 2

Hawaiian Electric Company, Inc.
Determination of Percent to System Kwh Mix
2005 Test Year Rebuttal

Line	(A) 2005 Norm Energy (Mwh)	Reference	
<u>Net Central Station Generation (Mwh)</u>			
1 Kahe	3,522,096	HECO-R-409 page 2	
2 Waiau	1,173,541	HECO-R-409 page 2	
3 Honolulu	119,375	HECO-R-409 page 2	
4 Diesel	6,465	HECO-R-409 page 2	
5 Total	4,821,477	HECO-R-409 page 2	
<u>Purchased Power (Mwh)</u>			
6 AES Hawaii, Inc.	1,531,096	HECO-RWP-502, page 1	
7 Kalaeloa Partners	1,548,254	HECO-RWP-501, page 1	
8 HPower	339,922	HECO-RWP-R503, page 1	
9 Tesoro	6,255	HECO-RWP-R504	
10 Chevron	735	HECO-RWP-R504	
11 Total	3,426,262	HECO-R-403, line 6	
	(A) 2005 Norm Energy (Gwh)	(B) % to Total System	
<u>Total Net System</u>			
12 Net Central Station Generation	4,821.6	58.41	HECO-R-403, line 7a
13 DG	7.4	0.09	HECO-R-403, line 7b
14 Purchase Power	3,426.3	41.50	HECO-R-403, line 6
15 Total Net System	8,255.3	100.00	HECO-R-403, line 5

Hawaiian Electric Company, Inc.
Determination of Central Station and CHP Percent to Total Generation Mbtu Mix

	(A) 2005 Mbtu Consumed	(B) % to Total Mbtu Consumed	
16 Central Station Generation	51,117,102	99.86	HECO-R-409 page 2
17 DG	72,568	0.14	HECO-R-409 page 2
18 Total Generation	51,189,670	100.00	

Hawaiian Electric Company, Inc.
Determination of Composite Cost of Total (Central Station and DG) Generation
For Avoided Cost Calculation Purposes
2005 Test Year Rebuttal

<u>Line</u>	<u>CENTRAL STATION ENERGY COMPONENT</u>	<u>Line</u>	<u>DG ENERGY COMPONENT</u>
1	Composite Cost of Generation 869.64 ¢/Mbtu	4	Composite Cost of DG Generation 1431.49 ¢/Mbtu
2	Percent of Generation Btu Mix 99.86 %	5	Percent of DG Btu Mix (100 - line 2) 0.14 %
3	Weighted Composite Cost of Central Station (line 1 x line 2) 868.4225 ¢/Mbtu	6	Weighted Composite Cost of DG (line 4 x line 5) 2.0041 ¢/Mbtu
<u>Line</u>	<u>Total Generation Composite Cost</u>		
	Composite Cost of Central Station and DG		
7	(line 3 + line 6)	870.43 ¢/Mbtu	

Line 1: HECO-RWP-1012 page 10, line 13
Line 2: HECO-RWP-1012 page 5, line 16
Line 4: HECO-RWP-1012 page 4, line 5
Line 5: HECO-RWP-1012 page 5, line 17

Hawaiian Electric Company, Inc.

DERIVATION OF TEST YEAR 2005 REBUTTAL
AVOIDED ENERGY COST PAYMENT RATES

Avoided Energy Rate - over 100 KW

Line	ON-PEAK	OFF-PEAK	SOURCE
1 Heat Rate	13,382 BTU / NET KWH	9,929 BTU / NET KWH	Docket #4569, HECO-101
Composite Fuel Cost of Total			
2 Generation (HECO & DG)	870.43 ¢ / MMBTU	870.43 ¢ / MMBTU	Test Year 2005 Rebuttal Composite Fuel Cost.
3 1 MMBTU / 1,000,000 BTU	1,000,000 BTU / MMBTU	1,000,000 BTU / MMBTU	
4 Unadjusted Payment Rate (line 1 x 2) / line 3	11.65 ¢ / NET KWH	8.64 ¢ / NET KWH	
5 O&M Adjustment	<u>0.37</u> ¢ / NET KWH	<u>0.49</u> ¢ / NET KWH	Appendix A, D&O 8298
BASE Avoided Energy			
6 Payment Rate	<u>12.02</u> ¢ / NET KWH	<u>9.13</u> ¢ / NET KWH	

Hawaiian Electric Company, Inc.

DERIVATION OF TEST YEAR 2005 REBUTTAL
SCHEDULE "Q" PAYMENT RATES

Schedule "Q" Rate - Under 100 KW

Line	ON-PEAK	OFF-PEAK	SOURCE
1 Heat Rate	13,382 BTU / NET KWH	9.929 BTU / NET KWH	Docket #7766
2 Composite Fuel Cost of Total Generation (HECO & DG)	870.43 ¢ / MMBTU	870.43 ¢ / MMBTU	Test Year 2005 Rebuttal Composite Fuel Cost.
3 1 MMBTU / 1,000,000 BTU	1,000,000 BTU / MMBTU	1,000,000 BTU / MMBTU	
4 Unadjusted Payment Rate (line 1 x 2) / line 3	11.65 ¢ / NET KWH	8.64 ¢ / NET KWH	
5 Power Factor Adjustment	-0.12 ¢ / NET KWH	-0.28 ¢ / NET KWH	Appendix A, D&O 8298
6 O&M Adjustment	0.37 ¢ / NET KWH	0.49 ¢ / NET KWH	Appendix A, D&O 8298
7 Pre Time-Weighted "Q" Payment Rate (line 4 + line 5 + line 6)	11.90 ¢ / NET KWH	8.85 ¢ / NET KWH	
8 Hour Weighting	x 14/24 HOURS / HOURS	x 10/24 HOURS / HOURS	
9 Time-weighted Peak Time-Related Schedule "Q" Energy Payment Rate (line 7 x 8)	6.94 ¢ / NET KWH	3.69 ¢ / NET KWH	
10 Time-Weighted "Q" ON PEAK Payment Rate	6.94 ¢ / NET KWH		
11 Time-Weighted "Q" OFF PEAK Payment Rate	3.69 ¢ / NET KWH		
12 Schedule "Q" Energy Payment Rate (line 10 + line 11)	10.63 ¢ / NET KWH		
13 Base 1996 Schedule "Q" Energy Payment	3.67 ¢ / NET KWH		Filed January 1, 1996
14 Difference Between Test Year 2005 Rebuttal and Base Sch "Q" Rates (line 12 - line 13)	6.96 ¢ / NET KWH		

Hawaiian Electric Company, Inc.
Determination of Generation Conversion Factor (Sales Heat Rate)
Ecaf at Proposed Rates
2005 Test Year Rebuttal

<u>Line</u>		<u>Reference</u>
1	Total Central Station Fuel Consumed 51,117,102 Mbtu	HECO-R-409 page 2
2	Sales 7,856.0 Gwh	HECO-R-403, line 1
	% of Central Station Gen. of Net	HECO-R-403, line 7a
3	System 58.41 Percent	
4	Kwh/Gwh Conversion 1,000,000 kwh/gwh	
5	Sales Heat Rate 0.011140 Mbtu/Kwh Sales	HECO-R-406 line 18

Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FILING MODIFIED FOR DG
Current Effective Rates

Line			Line		
1	Effective Date	2005 Norm. Test Year Rebuttal			
2	Supersedes Factor	-			
GENERATION COMPONENT			PURCHASED ENERGY COMPONENT		
	FUEL PRICES, ¢/MBTU			PURCHASED ENERGY PRICE - ¢/KWH	
3	Honolulu	906.67	35	THC - On Peak	12.020
4	Kahe	866.89	36	- Off Peak	9.130
5	Waiau-Steam	866.89	37	HRRV - On Peak	10.817
6	Waiau-Waste	0.00	38	- Off Peak	8.247
7	Waiau-Diesel	1,356.23	39	HRRV - On Peak (excess)	10.817
			40	- Off Peak (excess)	8.247
	BTU MIX, %		41	Chevron - On Peak	12.020
8	Honolulu	2.98	42	- Off Peak	9.130
9	Kahe	70.06	43	Kalaeloa	7.612
10	Waiau-Steam	26.64	44	AES-HI	2.549
11	Waiau-Waste	0.00			
12	Waiau-Diesel	0.32			
13	COMPOSITE COST OF GENERATION, ¢/MBTU	869.64		PURCHASED ENERGY KWH MIX, %	
14	% Input to system kWh Mix	58.41	45	THC - On Peak	0.11
15	Generation Efficiency Factor, Mbtu/kWh	0.011170	46	- Off Peak	0.08
16	WEIGHTED COMPOSITE GEN COST, ¢/kWh (Line 13 x 14 x 15)	5.67388	47	HRRV - On Peak	5.79
			48	- Off Peak	2.57
17	BASE GENERATION COST, ¢/Mbtu	287.83	49	HRRV - On Peak (excess)	0.00
18	Base % Input to System kWh Mix	58.64	50	- Off Peak (excess)	1.56
19	Efficiency Factor, Mbtu/kWh	0.011170	51	Chevron - On Peak	0.01
20	WEIGHTED BASE GEN COST, ¢/kWh (Line 17 x 18 x 19)	1.88531	52	- Off Peak	0.01
			53	Kalaeloa	45.19
21	Cost Less Base (Line 16 - 20)	3.78857	54	AES-HI	44.68
22	Revenue Tax Req Multiplier	1.0975			
23	GENERATION FACTOR, ¢/KWH (Line 21 x 22)	4.15796	55	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH	5.568
			56	% Input to System kWh Mix	41.50
	DG ENERGY COMPONENT		57	WTD CMP PURCH ENRGY COST, ¢/KWH (Line 55 x 56)	2.31072
24	COMPOSITE COST OF DG ENERGY, ¢/kWh	14.076			
25	% Input to System kWh Mix	0.09			
26	WTD COMP DG ENRGY COST, ¢/KWH (Line 24 x 25)	0.01267	58	BASE PURCH ENERGY COMP COST	3.005
			59	Base % Input to System kWh Mix	41.36
27	BASE DG ENERGY COMP COST	0.000	60	WTD BASE PRCH ENERGY COST, ¢/KWH (Line 58 x 59)	1.24287
28	Base % Input to System kWh Mix	0.00			
29	WTD BASE DG ENERGY COST, ¢/KWH (Line 27 x 28)	0.00000			
30	Cost Less Base (Line 26 - 29)	0.01267			
31	Loss Factor	1.059	61	Cost Less Base (Line 57 - 60)	1.06785
32	Revenue Tax Req Multiplier	1.0975	62	Loss Factor	1.059
33	DG FACTOR, ¢/KWH (Line 30 x 31 x 32)	0.01473	63	Revenue Tax Req Multiplier	1.0975
34	TOTAL GENERATION FACTOR ¢/KWH (Line 23 + 33)	4.17269	64	PURCHASED ENERGY FACTOR, ¢/KWH (Line 61 x 62 x 63)	1.24111
	SYSTEM COMPOSITE				
65	Total Generation and Purchased Energy Factor (Line 34 + 64)	5.41380			
66	Adjustment, ¢/kWh	0.000			
67	ECA Reconciliation Adjustment, ¢/kWh	0.000			
68	ENERGY COST ADJUSTMENT FACTOR, ¢/KWH (Line 65 + 66 + 67)	5.414			

Hawaiian Electric Company, Inc.
DG and Purchased Energy Loss Factor Calculations
Ecaf at Proposed Rates
2005 Test Year Rebuttal

<u>Line</u>		<u>Reference</u>
1	Net to System (gwh) 8,255.3	HECO-R-403, line 5
2	Sales (gwh) 7,856.0	HECO-R-403, line 1
3	DG & Purchase Power Loss Factor 1.051	Line 1 ÷ Line 2

Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FILING MODIFIED FOR DG
Proposed Rates

Line			Line		
1	Effective Date	2005 Norm. Test Year Rebuttal			
2	Supercedes Factor	-			
	GENERATION COMPONENT			PURCHASED ENERGY COMPONENT	
	FUEL PRICES, ¢/MBTU			PURCHASED ENERGY PRICE - ¢/KWH	
3	Honolulu	906.67	35	THC	- On Peak 12.020
4	Kahe	866.89	36		- Off Peak 9.130
5	Waiau-Steam	866.89	37	HRRV	- On Peak 10.817
6	Waiau-Waste	0.00	38		- Off Peak 8.247
7	Waiau-Diesel	1,356.23	39	HRRV	- On Peak (excess) 10.817
			40		- Off Peak (excess) 8.247
	BTU MIX, %		41	Chevron	- On Peak 12.020
8	Honolulu	2.98	42		- Off Peak 9.130
9	Kahe	70.06	43	Kalaeloa	7.612
10	Waiau-Steam	26.64	44	AES-HI	2.549
11	Waiau-Waste	0.00			
12	Waiau-Diesel	0.32			
13	COMPOSITE COST OF GENERATION, ¢/MBTU	869.64		PURCHASED ENERGY KWH MIX, %	
14	% Input to system kWh Mix	58.41	45	THC	- On Peak 0.11
15	Generation Efficiency Factor, Mbtu/kWh	0.011140	46		- Off Peak 0.08
16	WEIGHTED COMPOSITE GEN COST, ¢/kWh (Line 13 x 14 x 15)	5.65864	47	HRRV	- On Peak 5.79
			48		- Off Peak 2.57
17	BASE GENERATION COST, ¢/Mbtu	869.64	49	HRRV	- On Peak (excess) 0.00
18	Base % Input to System kWh Mix	58.41	50		- Off Peak (excess) 1.56
19	Efficiency Factor, Mbtu/kWh	0.011140	51	Chevron	- On Peak 0.01
20	WEIGHTED BASE GEN COST, ¢/kWh (Line 17 x 18 x 19)	5.65864	52		- Off Peak 0.01
			53	Kalaeloa	45.19
21	Cost Less Base (Line 16 - 20)	0.00000	54	AES-HI	44.68
22	Revenue Tax Req Multiplier	1.0975			
23	GENERATION FACTOR, ¢/KWH (Line 21 x 22)	0.00000	55	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH	5.568
			56	% Input to System kWh Mix	41.50
	DG ENERGY COMPONENT		57	WTD CMP PURCH ENRGY COST, ¢/KWH (Line 55 x 56)	2.31072
24	COMPOSITE COST OF DG ENERGY, ¢/kWh	14.076			
25	% Input to System kWh Mix	0.09			
26	WTD COMP DG ENRGY COST, ¢/KWH (Line 24 x 25)	0.01267	58	BASE PURCH ENERGY COMP COST	5.568
			59	Base % Input to System kWh Mix	41.50
27	BASE DG ENERGY COMP COST	14.076	60	WTD BASE PRCH ENERGY COST, ¢/KWH (Line 58 x 59)	2.31072
28	Base % Input to System kWh Mix	0.09			
29	WTD BASE DG ENERGY COST, ¢/KWH (Line 27 x 28)	0.01267			
30	Cost Less Base (Line 26 - 29)	0.00000	61	Cost Less Base (Line 57 - 60)	0.00000
31	Loss Factor	1.051	62	Loss Factor	1.051
32	Revenue Tax Req Multiplier	1.0975	63	Revenue Tax Req Multiplier	1.0975
33	DG FACTOR, ¢/KWH (Line 30 x 31 x 32)	0.00000			
			64	PURCHASED ENERGY FACTOR, ¢/KWH (Line 61 x 62 x 63)	0.00000
34	TOTAL GENERATION FACTOR ¢/KWH (Line 23 + 33)	0.00000			
	Line SYSTEM COMPOSITE				
65	Total Generation and Purchased Energy Factor (Line 34 + 64)	0.00000			
66	Adjustment, ¢/kWh	0.000			
67	ECA Reconciliation Adjustment, ¢/kWh	0.000			

Witness HECO RT-13
Does Not
Have Workpapers

Witness HECO RT-14
Does Not
Have Workpapers

Witness HECO RT-15
Does Not
Have Workpapers